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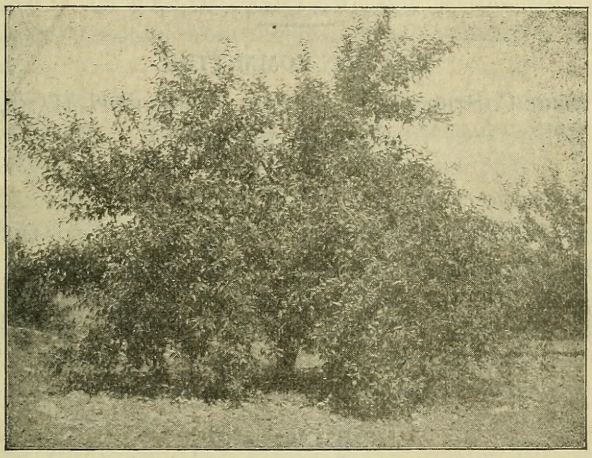
WEST VIRGINIA UNIVERSITY
AGRICULTURAL EXPERIMENT STATION,
MORGANTOWN, W. VA.

BULLETIN 75. APRIL, 1901.

Apple Districts of West Virginia.



BY L. C. CORBETT.

[The Bulletins and Reports of this Station will be mailed free to any citizen of West Virginia upon written application. Address Director of Agricultural Experiment Station, Morgantown, W. Va.]

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West Virginia's Apple Orchards.

Few people outside the immediate neighborhood of our fruit producing counties have any conception of the intensity or magnitude of this industry in our State. The State has, at present, two developed orchard areas, one situated in the northern counties bordering the Ohio river, and the other in that line of counties along the Potomac from the crest of the Allegheny mountains eastward.

In the north and west Hancock county leads all others, both in number and size of its orchards, as well as in the aggregate output. Here we find orchards ranging from a few hundred trees to the unusual number of 18,000, under a single management. Several orchards contain upwards of 4,000 trees, while the second largest contains not far from 9,000 bearing trees. As early as 1896 the crop of this, now famous region, reached the enormous number of 100,000 barrels, 300,000 bushels. This crop was borne by a land area not exceeding 2,000 acres: the value of the crop for that year alone was not far from $250,000, most of which was divided among about twenty men. The one station of New Cumberland handled during that season 70,000 barrels, in round numbers. The soil, climate and skill of the growers all seem to be the best possible for the development of a commercial apple industry. So far, the orchards in Hancock county have been remarkably free from both insect pests and fungus diseases. During the fall of 1899, however, the Bitter Rot made its appearance upon the Bently Sweet in a few orchards. Fortunately, however, the disease has so far confined its attack to this one variety. Steps have been taken by the Horticulturist of the State Experiment Station to check the ravages of this enemy by the use of proper spraying mixtures. If this work proves successful an industry such as above described will be safe; but should no means of

checking the disease be found, one of the most complete fruit developments in Eastern United States is doomed to more or less complete annihilation.

The product of this orchard area is of very considerable value, but the investment in soil, trees and store houses is many times the value of a single crop. No less than six large storage and warehouses have been provided for the retention of the products of these orchards. The smallest of these houses has a capacity of 2,500 barrels, while the largest holds 35,000. Here the fruit is stored from harvest until a suitable market offers, when the fruits are assorted, repacked and sent to the South or East, according to the demand.

Hancock county lies in a section suited to the growth of the Cow Pea, and already the use of this crop in the orchards is working wonders in the way of adding vigor and thrift to the trees, as well as inducing the growth of clover on lands which were before exceedingly difficult to seed with that crop.

An index of the superior merit of the fruit produced in Hancock county is had in the form of Special Mention for Willow Apples Grown by Charles Brown's Sons, Arroyo, W. Va., at the Paris Exposition. This comes as the result of fruit sent to the Paris Exposition as an exhibit of the W. Va. Horticultural Society. This Special Mention is in addition to the second prize awarded the State display as a whole.

The Hancock county region is by no means the only developed orchard region of the State. Berkeley and Jefferson county growers pride themselves on having some of the most profitable orchards in Eastern United States. The famous orchard of John Miller needs no further comment than mere mention. The example of Mr. W. S. Miller and a few other successful growers on "Apple Pie Ridge," which is in reality a part of the famous Albemarle Pippin region of Virginia, has stimulated many others to follow their example, and now the county of Berkeley contains not far from 3,000 acres of apple orchard and probably 1,500 of peach trees. These are in the main young orchards, so that while the annual product of the county at present is only 50,000 or 60,000 barrels, yet in 1899 alone over $200,000 came into the county as a result of the fruit

industry. The time is not far distant when the output will exceed that of the older Hancock county region. If the growers of these two regions were to come into closer contact each would be mutually benefitted. The Hancock county growers would find valuable suggestions in the cultural methods of Berkeley county, while the harvesting and marketing methods of the Hancock county orchardists would increase the profit on the Berkeley county product 10 per cent.

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A STUDY OF THE APPLE CROP OF OUR STATE, WITH SUGGESTIONS FOR ITS INCREASE.

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The fruit products of our State are at once suggestive and encouraging when viewed from a commercial standpoint. The apple output is remarkable considering the small area devoted to it. The crops are regular, large, made up of long keeping varieties of high quality. With orchards of this character in the State, the wonder is that the area devoted to this industry is so limited. An explanation for this condition may, perhaps, be found in that until very recently such a perishable product as fruit could not be successfully transported to the great seaboard cities from the more remote sections of our State. Still another reason may be found in the remarkable manner in which most of the best orchard land is suited to grazing purposes. Cattle and sheep thrive well upon the blue grass, which is such an important factor in the agriculture of West Virginia and Kentucky. More recently, however, the cattle business has been transferred to the plains, and since there is no outlet for the owners of mountain land along the line of general grain raising, a new industry must be worked out to fill the loss of the cattle business. This may be met by two lines of work—the growing of high grade mutton and high grade fruit, either as separate industries or in combination. Many States come in competition with us in the production of mut-

ton, but the areas in which fruits of high quality, fine appearance and in paying quantities can be produced are not many. The men who have the industry and pluck to attempt fruit growing upon an extensive plan are not numerous. Fruit growing, while one of the highest arts of general horticulture, is, at the same time, one of the most exacting; hap-hazard methods will not do. The man who would succeed must know his soil, exposure, the fruit that he intends to grow, the market and the peculiarities of that market. He must have a knowledge of the chief enemies and diseases which are apt to attack his trees or their fruits and the remedies for combating them. With such a statement before him, one, upon first thought, finds little to attract him to fruit growing; but for an ambitious, energetic man these are all factors which make for his success. Why? Because the indolent and the "doless" will have no fruit to compete with the careful cultivator. In this respect horticulture holds out more inducements than does general agriculture. If one plants corn, and only half cares for it, he is pretty certain to get something that the market will take; but in the case of fruits the market is more exacting. A good product will sell at a profit, when the fairly good and inferior either sells at a loss or is thrown upon the garbage heap.

In fruit growing the skill and taste displayed by the shipper counts for more in making a market for his product than in any other branch of agriculture. Uniform, neat and appropriate shipping cases always add to the value of the product, and slovenly packages invariably detract from the sale of an otherwise high grade commodity. In our own State no one factor has had more to do with the tardy growth of the fruit business than the indiscriminate planting of a great many varieties. The lists which are made a part of this report are the best proof of this statement. The influence of this style of planting has been to retard commercial development by catering to home demand. This was usually limited, and the surplus fruit was not such as to attract the apple buyers. The varieties offered were as numerous as the individuals offering them. In fact, in most localities where a thousand barrels of apples could be purchased, it would be necessary to accept at least thirty different sorts to make up the lot.

In apple growing sections generally the great apple crops are not the products of large orchards owned and operated by companies and corporations, but on the contrary the great mass of this product comes from the farm orchard, which usually consists of five to fifteen per cent. of the area of the farm. A farm of one hundred acres will have from eight to fifteen acres in orchard. The feature of this planting is that while there is usually a sufficient assortment, by far the greater bulk of the product consists of Baldwins, Greenings, Kings or Spys. In our State orchards are no less numerous, but the varieties are often not well selected, and they are too many.

Buyers are attracted to localities where large quantities of standard sorts are grown. It is a good rule in general planting to learn what varieties thrive best and bear most regularly and abundantly in your locality. Do not purchase untried sorts for commercial planting; the ideal variety is a favorite in the market and at the same time one that has stood the test in your locality.

GRAFTING.

Profitable apple growing in our State is not more general because of a lack of trees to make it so, but because the trees we do have bear undesirable sorts. This difficulty can be remedied by *grafting*. All trees bearing undesirable sorts, and all seedling trees not of special merit should be grafted If you decide to change the character of your orchard product by this means every available source of information should be taken advantage of in order that no mistake be made in the selection of the *sort* to be used. I use the word *sort*, for I am of the opinion that *one* or *two* varieties at most are sufficient for the commercial portion of any farm orchard, and that variety should be the same as that grown by the majority of one's neighbors. The reason, as stated before, being that a large quantity of one kind attracts the buyer. Top working by the cleft graft method is easily and quickly accomplished.

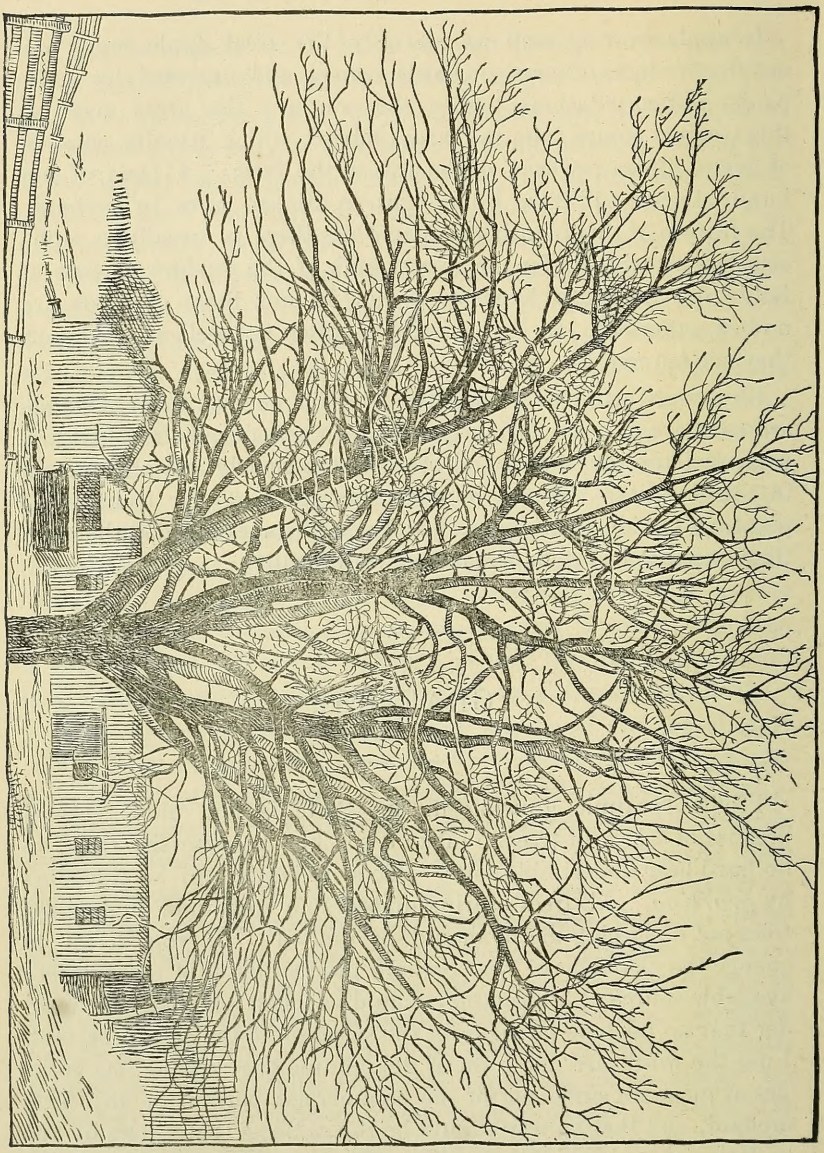

FIG. 1.—(*after Bailey*) A 25-YEAR-OLD APPLE TREE BEFORE TOP-GRAFTING.

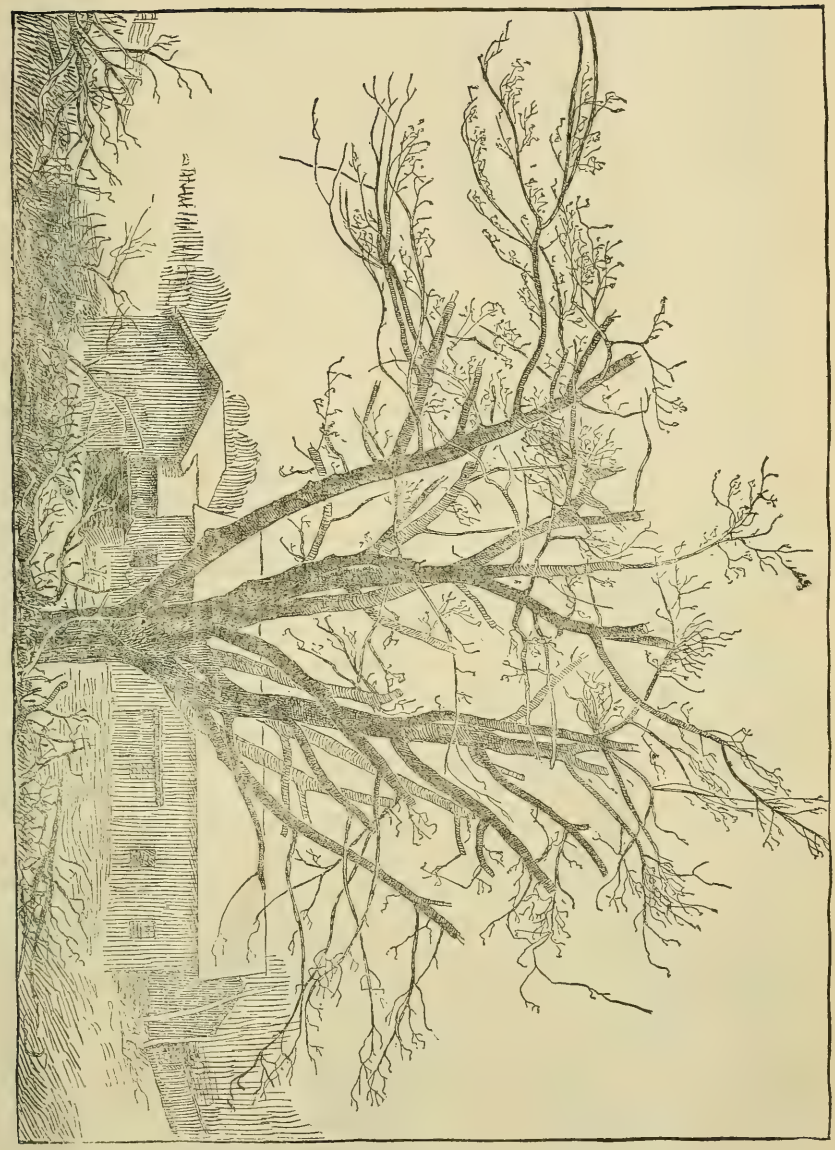

FIG. 2.—(*after Bailey*) TOP-GRAFTED TREE. FIG. 1 AFTER BEING OPERATED UPON.

A young tree can be changed in a single season; a tree ten years old in two years, and one twenty or more years old in three years.

The method of accomplishing this result is shown in the accompanying illustrations. Figure 1 represents a tree twenty-five years old before being grafted; figure 2 shows the same tree after the cions were set. The next year the growth from the cions will be sufficient to allow the remaining limbs to be removed from the tree shown in figure 2. When the stubs from the second year's cutting have been grafted the top of the tree will have been completely changed into the new variety. As will be noted from a glance at the drawing, the idea in top grafting is not to remove a few large limbs, but on the contrary to remove a larger number of smaller limbs, ranging in size from one inch to one and one half inches in diameter. In all this work it should be the aim of the operator to preserve the symmetry of the tree by cutting the stubs to receive the cions at a uniform distance from the center of the top of the tree. If this is looked after, the long bare limbs characteristic of so many top-worked trees can be avoided. Figure 3 shows an orchard which has been top-grafted and the fault above mentioned very successfully avoided. The position of the cions should be in a line parallel with the horizontal; in other words, the cions should stand so that one is not above the other.

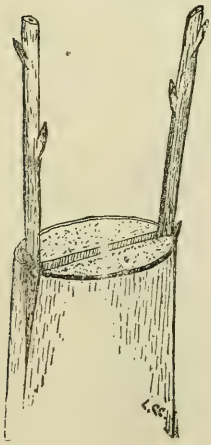

FIG. 4.

The method of making the cleft graft, which is the style usually used for top working large trees, is here shown in figures 3 to 6. Figure 4 shows the work, as completed, ready for waxing. Figure 5 illustrates the tool used for splitting and spreading the stock ready for the reception of the cions. A cion is shown in figure 6 at A, and a cross section of the wedge shaped end at B. The reason for giving the wedge-shaped end of the cion a thin inner surface is to bring th

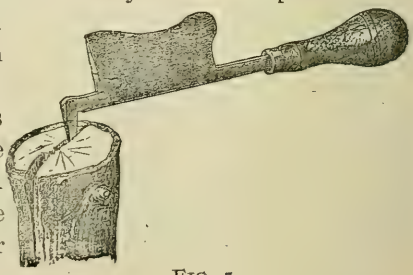

FIG. 5.

pressure of the stock against the outer edge of the cion so as to firmly press the growing portion of the cion against that of the stock. When the cion is set in the stock a slight inclination outward is given so that the outer ends of the cions are farther apart than at the top of the stub. This insures contact of the growing tissue of the cion with that of the stock by causing them to cross. The position of the cion in relation to the stock is shown in figure 7. In this figure the inner bark of both cion and stock are in contact, while the difference in the thickness of the outer bark of the two causes a decided break in the outline at a point where the cion is inserted. This style of grafting is called cleft grafting.

E.H.

FIG. 6.

Waxing is quite as important as a proper adjustment of the scions. This consists in covering all cut or exposed surfaces with grafting wax, grafting clay, or some non-corrosive substance which will exclude air and moisture. The wax may be applied hot, with a brush, but the safest plan is to spread it with the hand while it is only sufficiently heated to allow it to be worked like taffy. If spread carefully over all cut surfaces and pressed closely, upon cooling it will form a sleek coating quite impenetrable to air and moisture.

FIG. 7.

Grafting Wax. In this climate a soft wax is not desirable for exposed work. Soft wax may be used in whip-grafting, but in cleft grafting where all wounded surfaces are exposed to the weather, a hard wax, made by melting together five pounds resin, two and a half pounds beeswax, and one-half pound of tallow or one-half pint of linseed oil, is preferable.

Not only can an orchard be made to produce a merchantable product by top grafting in the manner above described, but it can really be rejuvenated. Grafting not only makes the tree over as far as its product is concerned, but the severe pruning to which it has been subjected to prepare it for grafting induces a strong, vigorous growth which seems to have a very advantageous effect upon the tree as a whole.

In connection with the process of rebuilding, cultivation should not be overlooked. If we renew the machinery and get it in good working order, what will it avail unless there is fuel to keep it going? A tree must have fuel and water in order to produce fruit. Cultivation is the easiest and often the cheapest way to supply the needs of the tree, but if the orchard is twenty years or more old, it is more than likely the available quantity of some of the important food ingredients have been well depleted, and that a more profitable return may be had by applying the lacking material in the form of a manure or fertilizer. The two elements most likely to be lacking under the conditions, *i. e.*, in an old orchard, are nitrogen and phosphoric acid. If the growth is good and the foliage is dark green in color and remains well upon the trees in the fall, then the chances are that if anything is needed it is phosphoric acid. If a complete manure is considered necessary, *i. e.*, one containing nitrogen, phosphoric acid and potash, stable manure may be used. A dressing of fine, ground bone meal at the rate of 500 lbs. per acre may be found more advantageous. Charles Brown's Sons, Hancock county, have worked wonders in one of their orchards by a single application of 800 lbs. of bone meal to the acre, without other cultivation. The increased value of the crop upon the portion of the orchard so treated during the past season, (1899) more than paid for the cost of material and the labor of applying it. The added vigor and luxuriance of the trees alone would be enough to pay for this expense, but the assurance of future crops which this brings makes it a paying investment.

If a special nitrogenous fertilizer seems desirable, then Nitrate of Soda may be used with good effect, while a special phosphoric acid fertilizer is easily and cheaply obtained in odorless slag phosphate or South Carolina Rock.

Some preliminary tests with fertilizers upon orchard trees seem to indicate that phosphoric acid is the one element most likely to be lacking in the orchard soils of our State.

By judicious grafting and intelligent cultivation and manuring the commercial value of the apple crop of our State can be increased four-fold, in three years, without the planting of a single new tree.

FIG. 3—TOP GRAFTED ORCHARD.

APPLE REGIONS, INDICATED BY CROP OF 1898.

During the Spring of 1898, warm days were the rule from the middle of February till the last of March. On March 29th, peach buds were open in localities nearest sea level and where the exposure was such as to excite growth. At this date, however, conditions changed, a heavy freeze came on the night of March 29th-30th, and from that date on, for the next twenty days, all conditions were unfavorable to the growth of plants. As a result, all peach buds in localities where growth had been pushed forward, were killed. Even apples and pears were destroyed, the freeze was so severe.

All localities did not suffer from the cold wave which had caused such destruction to fruit buds at Morgantown. The apple orchards of the northern panhandle escaped with little if any injury; but reports came in from various quarters chronicalling the great havoc which had been wrought by the freeze. Such freezes are common from year to year in certain portions of our State, while other localities not far removed, escape injury. It is evident, therefore, that commercial fruit growing will be most remunerative in those localities possessing climatic conditions which protect them from such changes in temperature. The opportunity offered by the severe cold wave which eame March 29th, was taken advantage of by the horticulturist for the porpose of gaining a general idea of the areas where injury had occurred, as well as those that had escaped. It is believed that a canvass of the State on that basis gives a very accurate idea of the general localities where commercial fruit growing can be engaged in with fair assurance that the crop will not be injured by any ordinary late Spring frost.

In certain places no one factor causes a more frequent loss of the fruit crop than late Spring frosts.

Before giving the data resulting from the phoenological survey of the State, it will be profitable to consider some of the factors which render one locality subject to late frosts, while others almost invariably escape injury.

In general we say that such good or evil results are dependent upon the climate of the place; but what is climate? Popular notion makes climate almost solely dependent upon annual mean temperature. Some of the most grievous blunders of the past horticultural ventures of this country have come through an evident misconception of the true idea of a climate: Climate is a general term, and should suggest to the mind not only the temperature of the place in summer, but during winter as well. The mean annual temperature is not a good guide; it should also suggest latitude, altitude, exposure, proximity to bodies of water or to large forest areas; the intensity and prevalence of sunlight; the prevailing winds; as well as the amount and distribution of the rainfall. In one locality a certain combination of these factors may be present to determine its climate, while in another, another set of factors quite different from those in the first, may determine its climate. In general, local climate and its bearing upon horticultural pursuits is largely determined by exposure, elevation and proximity to large bodies of water. The ameliorating influence of the Great Lakes make the famous Michigan peach belt a possibility, as well as rendering southern Ontario suited to grape growing and even to peach culture.

In our own State one locality may be suited to peach growing, while another, only a few miles distant, is in no way adapted to the industry. In one case exposure alone may make the difference, while in another it may be due to elevation, or air drainage.

In the survey which was made during the season of 1898, no attempt was made to explain why the buds were killed at Morgantown, and why they were not at Reedsville. The inquiry was for the purpose of determining the frosty and safe localities regardless of the factors which determined the difference.

The facts here presented were gathered by addressing the following questions to three or four special correspondents in each county of the State:

QUESTIONS ASKED.

1. Give the names of persons in the county who have apple orchards carrying a crop of fruit this fall—1898.

2. Are the orchards which bear most regularly upon high land, hill tops, hill sides, or on bottom lands of a valley?

3. Is there a large stream flowing near the best orchards, and if so what is its name?

4. In what directions do the lands face which carry orchards bearing most regularly?

These blanks were very generally returned, and the persons filling them out showed themselves familiar with the subject and interested in it.

The writer, therefore, takes this opportunity of expressing his appreciation for the kind co-operation and assistance of all who have been kind enough to fill out the above blank, or any of the others which have made the records which this bulletin contains possible.

The evidence gathered by the survey is shown in a graphic way by the accompanying map, Fig. 8.

The blank circles indicate the counties reporting no crop in 1898, while the area of the circle blackened represents the proportion of an average crop reported for the year.

A study of the distribution of the color upon the map is suggestive of the areas least liable to suffer from the late spring frosts. It, at the same time, clearly points out the influence of certain water courses upon the fruit crop.

In the extreme northern part of the State, occupying a part of that neck of land around which the Ohio river makes almost a complete loop, the apple crop was up to the average, although not a heavy one; while only a short distance farther south, probably a hundred miles, there is no crop reported from Marshall county. The crop was light along the Ohio until the section included between it and the Great Kanawha river, here again reports indicate much more fruit than in other counties.

The most striking feature brought out by the survey was the almost total failure of a crop in the counties traversed by the Monongahela and Little Kanawha rivers. The area drained by

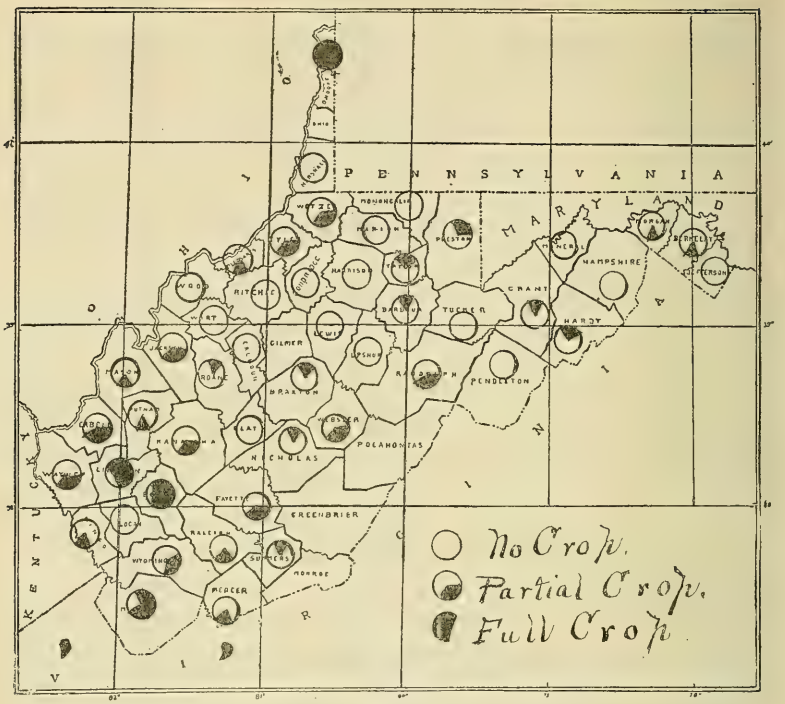

FIG. 8.

these rivers causes a divide between the north-west and south-east sections of the State. On both sides of this belt there was more or less of a crop reported. A line drawn from Morgantown to Weston, and thence westward to Parkersburg, would pass through an area of country almost without apples during the fall of 1898.

While it is probable that the true explanation of this will never be known, a possible reason is found in the fact that the area indicated is not as elevated as that to the east, or as that to the north-west. Air drainage is, therefore, less perfect, and severe frosts more liable to occur, while the higher and more southernly sections escape because of elevation and latitude.

In Tucker and Pendleton counties a like result seems to follow the Cheat and the South Branch of the Potomac, while in Minera

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LEWIS
BRAXTON
WEBSTER
POCAHONTAS
PRESTON
MONONGALIA
MARION
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BROOKE
OHIO
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PLEASANTS
RITCHIE
DODDRIDGE
WOOD
PARKERSBURG
WIRT
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and Hampshire counties the Potomac and its feeders were likely responsible for the condition indicated upon the map.

At first thought this evidence is directly opposed to the theory of the influence of bodies of water. It is not, however, as the good results only come from *large* bodies of water, while most disastrous consequences, from both early and late frosts, follow along the courses of small streams.

In Hancock county the good crop can be explained only by the good from the large river (the Ohio) in making an almost complete peninsula of the area, together with its extreme northern latitude, as compared with the remainder of the State.

Without giving a region close personal study for a series of years it would be a most difficult undertaking to predict its fitness for fruit growing, but with the aid of the suggestions which such a map as the above affords, the subject becomes less a matter of guess-work.

MAP SHOWING DISTRIBUTION OF APPLE AREAS.

The map here presented is based on an independent inquiry. A large state map was reproduced by photographic processes, and a county map mailed to several correspondents in each county of the State with the request that they indicate upon the map the areas of the county now used for commercial orcharding, as well as those areas which by soil and location were suited to the industry; such localities are indicated upon the map by the *black* cross-hatching. The heavy *red* areas denote the presence of commercial orchards, while the general *red cross-hatching* indicates all sections of the State which by soil, location, and exposure

might be used for orchard purposes. Those areas covered by both black and red cross-hatching of course represent sections in which experience and physical conditions each denote fitness for apple culture, while the red *V*'s represent areas in which the altitude and and exposure suggest the possibility of such an industry, although they were not so marked by correspondents.

RELATIVE VALUE OF VARIETIES.

The accompanying table showing the Relative Value of Varieties in the several counties of the State was compiled from the reports of nearly two thousand answers to inquiries regarding the localities in which the several varieties of the list reported by the American Pomological Society thrive best. The list of varieties as suggested by the above named society was forwarded to some 10,000 citizens of the State and out of these about 2,000 were marked and returned. From those received for any county a preliminary table was made up giving the actual number of persons reporting *Ben Davis*, for example, together with the number of those reporting every other variety from that county. If every report received from a given county named Ben Davis it was recorded as 100. If one half of the reports mentioned Rome Beauty it is recorded as 50, etc., so that the table shows at a glance the relative standing of the several varieties in any county as well as bringing them on a parallel basis for comparison according to counties or sections of the State. To illustrate, Ben Davis followed across the table may stand 100 in Berkeley county and only 66 in Preston. This, therefore, gives the prospective planter the esteem in which this variety is held in these two counties. What is true of the Ben Davis is true of every other variety listed.

The italicised figures in the table are to indicate varieties held in high repute in their respective counties for commercial purposes and for regular annual bearing, particularly the latter.

The table is also divided into three sections covering the three life zones of the State, namely,—the Canadian, Transition and Upper Austral. By comparing the figures following the several varieties across these zones an idea can be gained of the fitness of the various sorts for such climatic conditions. As might be expected, the Baldwin and Fallawater appear as important sorts in the Canadian zone, while they fall off in popularity in the Transition and Upper Austral. While I do not consider these reports as final proof of the adaptibility of any sort to a given locality, yet they are sufficiently reliable to serve as a general guide for commercial planting. Future studies of these problems will undoubtedly enable horticulturists to predict with a marked degree of accuracy what sorts can be planted with assurance of success in a given locality, as yet unexplored as a region for commercial orcharding. The soil, elevation, latitude and exposure of a tract being known, a list of varieties suited to it can be suggested. Such studies then have a more extended application than to merely determine which sorts are most popular in any given region.

Table Showing the Relative Value of Varieties

VARIETY NAME.	CANADIAN.					TRANSITION.						
	Grant, south-west part.	Tucker, east.	Randolph, east.	Pocahontas, north center.	McDowell, east half.	Preston.	Taylor.	Barbour.	Tucker.	Upshur.	Randolph, west half.	Webster.
APPLE LIST.												
CRABS. (*P. baccata.*)												
Elgin	....	....	....	....	....	....	....	....	....	....	....	....
Hyslop	....	100	....	....	....	6	....	16	20	16	18	12
Spitzenburg	....	....	....	....	....	24	24	16	....	32	6	36
Transcendent	....	100	....	50	....	6	12	32	20	16	24	12
Whitney No. 20	....	....	....	....	....	....	....	....	....	....	....	....
COMMON APPLES (*P. malus*).												
Alexander	....	100	....	50	....	6	....	....	....	16	12	12
Arkansas (Mammoth Black Twig).	....	100	....	....	....	....	....	16	....	16	12	48
Autumn Swaar	....	....	....	....	....	....	....	....	....	....	....	....
Baldwin	....	100	*100*	50	25	*78*	60	*96*	40	*80*	48	*72*
Belmont	....	....	....	....	....	12	12	16	....	....	....	....
Ben Davis	....	100	*100*	*100*	50	66	*72*	*96*	40	*96*	40	*84*
Benoni	....	....	....	....	....	....	....	....	....	....	....	24
Bentley	....	....	....	....	....	6	24	....	....	32	....	12
Bethlemite	....	100	....	....	....	....	....	....	....	....	....	....
Bevan	....	....	....	....	....	....	....	....	....	....	....	....
Black (Jersey)	....	....	....	....	....	12	12	....	....	16	6	....
Bonum	....	....	....	....	....	....	....	....	....	....	....	....
Bough, sweet	....	100	....	50	....	54	48	32	40	....	24	24
Bradford (Best Ky. Red)	....	....	....	....	....	....	....	....	....	....	12	12
Buckingham	....	100	....	....	50	....	....	....	20	....	....	12
Buncome (Red Winter Pearmain.)	....	....	....	50	....	12	24	32	....	32	6	36
Canada Reinette	....	....	....	....	....	....	....	....	....	....	....	....
Cannon (Pearmain)	....	100	....	....	....	....	....	....	....	....	6	....
Chenango	....	100	....	....	....	....	....	....	....	....	....	....
Clark Pearmain	....	....	....	....	....	....	....	....	....	16	6	....
Cooper	....	....	....	....	....	....	....	....	....	....	6	24
Cracking	....	....	....	....	....	....	....	....	....	....	....	....
Early Harvest	....	*100*	....	*100*	*75*	*72*	*72*	*96*	40	*80*	*60*	*84*
Early Joe	....	....	....	....	....	12	....	....	....	....	6	12
Early Strawberry	....	100	....	....	....	30	24	32	....	64	18	24
English Russett	....	100	*100*	50	....	18	24	64	....	64	12	24
Fallawater	....	100	*100*	*100*	50	*72*	60	64	40	48	54	60
Fall Jenneting	....	....	....	....	25	18	....	32	....	16	6	24
Fall Orange	....	....	....	....	....	6	....	....	....	16	....	12

in the Life-Zones and Counties of the State.

TRANSITION.									UPPER AUSTRAL.										
Raleigh.	Nicholas.	Fayette.	Greenbrier, north and west.	Pendleton.	Pocahontas, except center.	Mercer.	Grant, northeast.	Mineral, west corner.	Hancock.	Brooke.	Ohio.	Marshall.	Wetzel.	Monongalia.	Tyler.	Marion.	Pleasants.	Harrison.	Doddridge.
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	20	....	....	....	50	16	25	....	7	....	....	8	12	....	....	....	....	16	....
....	20	....	100	....	25	16	50	....	35	40	42	48	24	75	28	45	24	40	....
....	20	20	100	....	50	48	....	32	14	....	42	24	18	....	....	27	....	12	16
....	....	....	....	....	....	16	....	16	....	20	....	12	16	....	....	....	....	4	....
....	20	20	....	....	25	32	25	....	14	20	....	12	18	....	14	....	....	12	....
....	....	40	....	....	25	32	....	....	....	....	....	24	12	....	28	27	....	8	16
....	....	....	....	....	....	....	....	16	14	40	14	12	6	....	....	....	....	8	....
80	60	60	100	50	*100*	64	*75*	*80*	*84*	*100*	*98*	*96*	*72*	*100*	56	*81*	*96*	*76*	32
40	....	....	....	....	....	32	....	....	14	20	28	12	18	....	....	....	....	72	....
100	*80*	60	100	50	*100*	*96*	*100*	64	*70*	*100*	*84*	*96*	*84*	*100*	*70*	*90*	*96*	*84*	48
20	....	....	....	....	25	32	....	....	7	....	....	12	6	....	....	....	12	....	....
....	....	....	....	....	....	....	....	....	14	*80*	42	48	24	....	....	36	....	24	....
....	....	....	....	....	....	....	....	....	*68*	40	....	....	6	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	12	12	....	....	18	1	8	....
....	....	....	....	....	....	16	....	....	....	....	....	....	....	....	....	....	....	....	....
....	20	40	....	....	50	32	*75*	16	*68*	*80*	42	36	42	50	28	36	36	60	32
....	....	....	....	....	....	....	....	....	....	....	....	12	12	....	....	9	....	8	....
60	....	20	....	....	....	64	....	....	....	....	....	....	6	....	....	....	....	4	....
60	....	....	100	....	50	*80*	....	....	7	60	*84*	48	36	....	42	....	48	28	....
....	....	....	....	....	....	....	....	....	....	....	....	....	6	....	....	....	....	4	....
....	....	....	....	....	....	32	....	32	7	40	....	12	12	....	....	....	12	8	....
....	....	....	....	....	....	....	....	16	....	....	14	....	....	....	....	....	....	....	....
....	....	....	....	....	....	16	....	....	....	....	....	....	6	....	....	....	....	....	....
....	....	....	....	....	....	....	....	16	21	60	....	12	....	....	14	9	60	4	....
....	....	....	....	....	....	....	....	....	....	40	....	....	6	....	....	....	....	....	....
100	*80*	*80*	100	50	*100*	*96*	*100*	64	77	70	*70*	*96*	*84*	*100*	*84*	*81*	*96*	*88*	48
....	....	....	....	....	....	....	25	....	7	20	*74*	72	6	....	....	9	....	16	....
20	*80*	80	....	50	....	16	25	32	14	40	56	60	54	50	14	*72*	....	64	32
....	40	....	....	50	....	16	25	32	14	20	70	60	36	25	28	45	12	40	32
80	40	60	100	50	*75*	64	*100*	64	*63*	40	28	12	30	25	56	18	60	60	48
20	....	20	100	....	*75*	16	....	16	21	40	....	....	12	....	14	....	12	36	....
....	....	....	....	....	....	16	....	....	7	....	....	....	12	....	....	9	....	....	....

Table Showing the Relative Value of Varieties in

VARIETY NAME.	CANADIAN.					TRANSITION.						
	Grant, south-west part.	Tucker, east.	Randolph, east.	Pocahontas, north centre.	McDowell, east half.	Preston.	Taylor.	Barbour.	Tucker.	Upshur.	Randolph, west half.	Webster.
COMMON APPLES—Continued.												
Fall Pippin				*100*	50	48	60	64	20	64	24	72
Fall Wine				*100*		36	36	64		48	24	24
Fameuse							12					
Fanny					25							
Gano		100				6	12				24	12
Gilpin							12					
Golden Sweet		100		*100*	25	30	36	64		48	24	24
Gravenstein		100		50		6			40	16	6	
Green Cheese					25	6						12
Green Newtown				50		12						
Grimes Golden (Native)		100		*100*	25	60	60	*96*	40	64	36	24
Haas (Fall Queen)								16				
Hewes Crab												
Higby												
Highton Sweet												
Horse							12					
Hubbardston		100							20			
Huntsman												12
Jersey Sweet		100		50		18						
Jonathan		100				12				16		
Junaluskee										16	6	12
Kent Beauty						18						
Keswick		100							20		6	
Kinnaird												
Lansingburg						6						
Lawver (Delaware Red Winter)				50		18	24	16	20			
Limber Twig		100	*100*		50	48	36	48	20	*80*	36	48
McAfee												
Maiden Blush		100	*100*		50	66	48	*96*	20	*96*	42	60
Mangum												
Margaret (Early Red)				50								
Moore Sweet					25					32	12	
Munson					25		12		20			
Nansemond		100				6	24		40	48		12
Nickajack		100		50	50	6	36			16		
Northern Spy		100	*100*	*100*	25	60	60	*96*	40	*80*	48	72
Northwestern Greening			*100*			6	12			16	6	
Oconee										16	12	

the Life-Zones and Counties of the State—Continued.

TRANSITION.										UPPER AUSTRAL.									
Raleigh.	Nicholas.	Fayette.	Greenbrier, north centre.	Pendleton.	Pocahontas, except centre.	Mercer.	Grant, northeast.	Mineral, west corner.	Hancock.	Brooke.	Ohio.	Marshall.	Wetzel.	Monongalia.	Tyler.	Marion.	Pleasants.	Harrison.	
40	80	40	100	50	100	96	25	32	70	100	98	84	88	75	84	90	72	88	
20					50	16		16		20	28	36	36		42	45	36	56	
		20				32			14	80	42	12	6					4	
											14	12							
												12						4	
	20																		
20	80	80	100		25	32	25	64		80	84	60	36		56	54	60	60	
		60			100	32			14	40	50	12						8	
		20				16				20	14							12	
			100						28	40	42		6					12	8
40		60	100	50	100	64	25	80	63	100	98	48	54	25	84	54	84	92	
											14		6					8	
		20							7		14		12	25	14	18	24	12	
							25												
													6					4	
60					25	32			35	40	42	24						4	
	20					16						12	6						
							25		7	20	14	36	12		28			16	
						16			14	40		24						12	32
	20	20																	
								16					12					12	
							25		14	20	14		6						
		20																	
20						16			21			12					24	20	
40		20	100		75	80	25	48	21	40	14	12		100	28	22	36	52	
		20								20		12	6				12		
100	40	80	100	50	75	64	100	80	63	100	84	84	60	100	56	81	84	80	
										20			6					4	
20											14		12		14				
							25											8	
		20		50	50		25											12	
20	40	20			50	16												8	
100	40	20	100	50	100	80	75	80	70	100	98	96	66	100	84	90	96	72	
	20	20								40			12					12	8

Table Showing the Relative Value of Varieties in

VARIETY NAME.	CANADIAN.					TRANSITION.						
	Grant, south-west part.	Tucker, east.	Randolph, east.	Pocahontas, north center.	McDowell, east half.	Preston.	Taylor.	Barbour.	Tucker.	Upshur.	Randolph, west half.	Webster.
COMMON APPLES—Continued.												
Oldenburg, Duchess of	....	100	*100*	....	....	24	....	*80*	20	16	24	12
Ortley	....	....	....	....	....	....	....	....	....	....	....	....
Paragon	....	....	....	....	....	....	....	....	....	....	6	12
Pewaukee	....	100	*100*	....	....	12	....	16	....	32	....	....
Porter	....	....	....	....	....	54	12	....	40	....	....	....
Primate	....	100	....	....	....	....	....	....	....	....	....	....
Pryor, Red	....	....	....	....	....	6	....	....	....	....	....	....
Pumpkin Sweet, Pound Sweet	....	....	....	....	50	18	60	48	20	32	18	60
Ralls Genet	....	100	....	50	25	24	12	16	40	16	6	12
Rambo	....	....	*100*	*100*	25	66	*72*	*80*	40	*96*	54	*72*
Ramsdell Sweet	....	....	....	50	....	6	....	....	....	....	....	....
Red Astrachan	....	100	....	50	50	54	60	*80*	40	32	42	24
Red Canada	....	....	....	50	....	6	12	....	....	16	....	....
Red June	....	100	....	50	50	6	36	16	20	32	18	12
Red Stripe	....	....	....	....	....	6	....	....	....	....	12	12
Rhode Island Greening	....	100	*100*	*100*	25	48	*72*	48	40	48	24	36
Rome Beauty	....	100	....	*100*	50	48	*72*	*96*	40	*80*	60	*72*
Roxbury	....	100	*100*	....	....	24	24	16	40	16	18	12
Shockley	....	100	....	....	25	....	....	....	....	....	....	....
Shackelford	....	....	....	....	....	....	....	....	....	....	....	....
Smith's Cider	....	....	....	....	....	12	....	....	20	16	....	12
Smokehouse	....	100	*100*	50	50	66	60	48	40	48	42	24
Sops of Wine	....	100	....	....	....	18	24	16	....	16	12	12
Stark	....	100	....	....	....	6	12	....	....	....	6	....
Stephenson	....	....	....	....	....	....	24	....	....	....	....	....
Summer King	....	....	....	....	....	....	....	....	....	....	6	....
Summer Pearmain	....	....	....	50	....	6	....	....	....	*80*	6	48
Summer Queen	....	....	....	50	....	....	....	32	20	16	12	....
Summer Rose	....	....	....	....	....	....	....	....	20	16	6	....
Tetofski	....	....	....	50	....	6	....	16	40	....	12	....
Tompkins King	....	....	*100*	50	....	36	60	64	40	64	24	24
Townsend	....	....	....	....	....	....	12	....	....	....	6	....
Twenty Ounce	....	....	....	50	....	24	12	32	40	....	24	60
Vandevere	....	100	....	....	....	24	....	32	40	....	6	12
Virginia Greening	....	....	....	....	....	....	....	....	....	16	6	12
Walbridge, Edgar Red Streak	....	100	....	....	....	....	....	32	....	16	6	....
Wealthy	....	100	....	....	....	....	36	48	20	16	18	12
White June Eating	....	....	....	....	....	6	12	....	....	16	12	....

the Life Zones and Counties of the State.—Continued.

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Raleigh.	Nicholas.	Fayette.	Greenbrier, north and west.	Pendleton.	Pocahontas, except centre.	Mercer.	Grant, northeast	Mineral, west corner.	Hancock.	Brooke.	Ohio.	Marshall.	Wetzel.	Monongalia.	Tyler.	Marion.	Pleasants.	Harrison.	Doddridge.
60	20	40	....	....	*75*	64	25	16	35	60	28	....	24	....	42	27	....	24	....
....	....	....	....	....	....	....	....	....	....	....	14	....	....	....	....	....	....	....	....
....	....	20	....	....	....	....	....	16	7	20	....	12	....	....	....	....	....	....	....
....	....	....	....	....	25	16	50	....	21	20	....	12	6	....	....	18	....	20	....
....	....	20	....	....	....	16	25	....	14	....	28	....	6	....	....	9	....	....	48
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	14	80	....	12	18	....	14	....	24	8	....
20	40	20	100	....	....	32	25	32	56	*100*	*84*	*84*	48	....	*70*	36	*72*	40	16
40	20	60	100	50	*75*	64	25	16	....	60	....	12	6	25	28	18	....	14	....
40	40	40	....	50	*75*	48	*75*	*80*	....	*100*	*84*	*84*	*78*	*100*	*70*	*90*	*85*	*76*	48
....	....	....	100	....	....	....	....	....	....	....	....	....	....	....	....	....	....	8	....
20	....	60	....	50	*75*	64	50	64	*63*	*80*	*84*	60	60	50	*70*	18	60	52	32
....	....	....	....	....	....	16	....	....	28	20	....	....	....	....	....	....	....	8	....
20	....	20	....	....	....	64	....	16	....	....	28	12	....	....	42	....	24	16	....
20	....	....	....	....	....	32	....	....	7	20	28	....	12	....	....	....	12	4	....
20	40	40	....	50	*100*	32	50	48	49	*100*	*98*	*72*	66	*75*	56	45	60	*76*	*48*
80	*80*	*80*	100	50	*100*	*80*	*75*	32	*56*	*100*	*84*	*84*	*74*	*100*	*84*	*81*	*96*	*80*	48
....	....	20	100	....	25	16	....	16	49	*100*	*84*	*72*	54	....	56	18	48	48	....
20	....	20	....	....	25	32	....	16	....	20	14	12	....	....	....	....	....	4	....
....	....	....	....	....	....	....	....	....	....	20	..	12	....	....	....	....	....	....	....
20	....	20	100	....	25	32	....	16	49	60	42	24	18	....	28	....	48	20	....
....	....	60	100	50	*100*	48	*75*	48	35	80	42	12	18	25	....	54	...	68	32
....	40	....	....	....	....	48	....	....	7	20	..	12	....	....	....	9	..	36	....
20	....	20	....	....	25	....	25	....	49	*100*	14	48	18	....	42	36	48	32	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	16	....	....	7	....	14	12	12	25	....	....	..	4	....
60	....	20	....	....	50	32	....	....	14	40	28	48	18	....	....	....	...	12	....
60	20	...	....	....	25	16	....	....	21	20	42	24	12	...	14	...	12	20	....
....	20	....	....	....	....	....	....	....	....	...	....	24	12	....	...	....	....	12	....
20	....	....	....	....	50	16	25	16	14	20	....	12	6	....	14	9	....	4	....
40	....	20	100	....	*75*	....	25	64	*63*	*100*	*70*	*84*	36	25	56	63	12	40	16
....	....	....	....	....	....	....	....	....	....	40	...	....	....	....	....	....	....	....	....
40	....	20	100	....	*75*	16	*75*	48	56	60	56	12	12	....	28	27	12	36	16
.	40	40	....	....	....	16	50	32	35	40	..	24	24	25	14	36	36	36	....
....	....	....	....	....	....	16	....	....	....	20	...	....	6	...	28	....	24	4	....
20	....	....	....	....	....	16	25	....	21	....	14	12	6	....	14	9	24	12	....
20	....	40	....	...	25	48	*75*	....	28	60	42	....	6	....	...	27	24	28	...
....	....	....	....	....	....	....	....	....	7	20	....	....	..	....	....	...	..	12	....

Table Showing Relative Value of Varieties in

VARIETY NAME.	CANADIA.					TRANSITION.						
	Grant, south-west part.	Tucker, cas	Randolph, east.	Pocahontas, north centre.	McDowell, east half.	Preston.	Taylor.	Barbour.	Tucker.	Upshur.	Randolph, west half.	Webster.
COMMON APPLES—Continued.												
White Paradise	....	100	....	....	25	....	12	....	40	....	...	...
White Pearmaine	....	....	....	50	....	....	....	....	....	....	6	....
White Pippin		....	....	50	....	....	....	16	....	....	6	12
Willow Twig (native)	....	....	....	....	.. .	30	12	16	....	..	12	12
Wine Hays	....	....	....	....	...	...	12	....	....	....	....	....
Winesap	....	100	....	*100*	50	30	48	*80*	40	*96*	30	60
Yellow Bellflower	....	100	....	*100*	....	42	60	64	40	*80*	24	*72*
Yellow June	....	....	....	....	....	....	12	....	....	....	12	24
Yellow Transparent	....	100	....	50	*75*	30	36	32	20	32	30	36
Yellow (New Town) Albemarle Pippin.	....	....	*100*	*100*	25	6	12	16	20	16	12	12
York Imperial	....	100	*100*	50	25	48	24	48	40	32	12	24

the Life-Zones and Counties of the State.—Continued.

TRANSITION.									UPPER AUSTRAL.										
Raleigh.	Nicholas.	Fayette.	Greenbrier, north and west.	Pendleton.	Pocahontas, except center.	Mercer.	Grant, northeast.	Mineral, west corner.	Hancock.	Brooke.	Ohio.	Marshall.	Wetzel.	Monongalia.	Tyler.	Marion.	Pleasants.	Harrison.	Doddridge.
....	....	....	....	50	25	16	25	16	....	....	14	....	6	....	....	....	.	16	....
....	....	....	100	....	....	....	....	....	....	....	14	24	....	....	....	....	12	8	...
....	60	....	100	....	50	16	....	16	7	20	28	24	6	50	14	9	....	12	....
....	...	....	100	....	....	16	....	....	*56*	60	28	24	12	....	42	18	36	32	16
....	....	....	....	....	....	....	....	....	....	....	14	....	....	....	....	....	....	4	....
60	60	60	....	50	*100*	*80*	50	48	28	*80*	42	*72*	36	....	56	54	*72*	*76*	16
80	20	40	...	...	*100*	16	*75*	64	*68*	*100*	*84*	50	66	25	*70*	63	*96*	*72*	48
....	....	....	....	....	....	16	25	16	....	....	....	....	....	30	28	....	12	16	....
100	*80*	40	100	....	....	64	*75*	*80*	42	*80*	*70*	*72*	48	25	56	45	24	56	....
....	....	20	....	50	50	16	50	32	42	40	56	24	6	...	....	9	24	44	....
....	....	40	....	....	50	48	50	*96*	14	40	28	12	6	50	42	54	24	68	....

Table Showing the Relative Value of Varieties in

VARIETY NAME.	UPPER AUSTRAL.											
	Wood.	Ritchie.	Lewis.	Wirt.	Jackson.	Roane.	Calhoun.	Gilmer.	Braxton.	Mason.	Putnam.	Kanawha.
APPLE LIST—Continued.												
CRABS. (*P. baccata*).												
Elgin	....	...	6	....	8	5	10	....	..	....	....	....
Hyslop	14	....	6	14	36	15	20	28	....	7	7	....
Spitzenburg	....	30	12	28	8	10	20	....	....	....	....	10
Transcendent	14	30	30	42	40	25	20	28	20	7	35	10
Whitney No. 20	28	10	6	....	4	...	20	....	....	....	....	....
COMMON APPLES (*P. malus*).												
Alexander	14	10	18	....	21	5	50	....	20	7	7	....
Arkansas (Mammoth Black Twig)	14	20	30	...	20	5	30	14	20	14	7	20
Autumn Swaar	....	....	...	28	....	...	....	....	....	...	...	10
Baldwin	56	20	*72*	*70*	56	*70*	50	42	60	63	7	10
Belmont	....	....	18	14	8	15	10	....	....	....	*91*	*80*
Ben Davis	*70*	60	*78*	*98*	*88*	*85*	*80*	*84*	*100*	*77*	49	60
Benoni	14	10	....	14	8	5	....	....	....	....	7	...
Bentley	14	....	....	14	8	10	30	....	....	....	7	10
Bethlehemite	....	....	....	....	4	....	...	....	....	....	....	10
Bevan	....	....	..	....	...	....	...	....	....	....	...	....
Black (Jersey)	....	....	...	....	8	5	10	14	....	....	...	10
Bonum	....	....	....	....	....	....	....	....	....	7	...	....
Bough, sweet	14	20	18	42	52	30	20	42	20	14	14	10
Bradford (Best Ky. Red)	....	....	....	....	12	5	10	....	....	7	....	10
Buckingham	14	....	....	....	4	10	10	....	....	7	....	20
Buncome (Red Winter Pearmaine)	42	20	12	14	28	40	....	56	40	21	21	40
Canada Reinette	....	....	....	....	4	....	....	....	....	....	....	....
Cannon (Pearmain)	....	....	....	....	8	5	....	....	....	....	7	....
Chenango	....	....	....	....	....	....	....	....	....	....	....	....
Clark Pearmain	14	....	....	....	....	5	....	....	....	....	....	....
Cooper	28	20	6	28	28	15	20	....	....	49	14	10
Cracking	....	....	....	....	....	....	....	....	..	....	....	....
Early Harvest	56	60	*84*	*84*	*88*	*85*	*90*	*84*	*80*	*70*	*91*	*80*
Early Joe	14	....	6	....	4	....	10	....	20	7	....	....
Early Strawberry	42	40	42	*70*	76	45	30	56	20	42	35	30
English Russet	....	20	30	28	20	40	30	42	20	7	28	30
Fallawater	42	30	*78*	70	60	60	30	56	60	42	35	30
Fall Jenneting	....	....	18	....	20	....	20	14	20	21	28	50
Fall Orange	1	....	6	....	4	....	....	*84*	....	....	14	10
Fall Pippin	42	40	66	*84*	*68*	65	*90*	42	*80*	42	63	40

the Life-Zones and Counties of the State—Continued.

UPPER AUSTRAL.																			
Clay.	Cabell.	Lincoln.	Wayne.	Logan.	Mingo.	Wyoming.	McDowell, west half.	Mercer, east half.	Summers.	Fayette.	Monroe.	Greenbrier, east half.	Mineral, east two-thirds.	Grant, east half.	Pendleton.	Hampshire, N. E. one-third.	Morgan.	Berkeley.	Jefferson.
....	....	....	12	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	16	....	24	....	20	....	....	....	....	....	21	....	20	....	....	....	24	44	....
33	8	..	....	....	20	....	*100*	....	27	....	7	....	....	....	50	25	....	22	33
33	56	....	24	....	20	....	....	....	18	50	42	50	20	....	....	....	12	33	....
....	....	....	12	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
33	16	....	24	50	20	....	....	....	....	....	21	....	....	....	....	....	12	22	11
....	16	50	12	50	40	....	....	....	18	50	35	....	....	....	....	....	12	55	....
....	8	....	....	....	....	....	....	....	....	....	14	....	....	....	....	..	....	....	....
66	40	50	48	50	20	....	*100*	....	63	50	*77*	*100*	*80*	50	*100*	*75*	24	*77*	*77*
33	32	....	12	.. .	....	....	....	....	9	...	28	....	....	....	....	25	....	22	22
66	*72*	50	*96*	*100*	*80*	....	*100*	...	*90*	*100*	*98*	*100*	*80*	50	*100*	*75*	*72*	*99*	*88*
....	....	....	36	....	....	....	....	....	....	....	14	....	....	50	*100*	....	....	22	33
....	....	....	....	....	20	....	....	.. ..	8	....	7	50	....	....	....	.. .	...	....	....
....	....	..	....	....	..	....	....	....	..	....	....	....	....	....	....	..	....	..	....
....	....	..	....	....	....	....	....	....	..	....	....	....	....	....	....	..	..	....	...
...	....	....	....	...	20 ...		....	....	9	....	.. .	....	....	....	....	....	24	11	11
....	....	....	....	....	....	....	....	....	....	....	27	....	...	....	*100*	....	....	11	11
33	32	50	36	*100*	....	....	....	....	36	50	21	*100*	20	50	*100*	....	....	44	33
33	...	....	....	..	40	....	..	....	7	....	14	....	....	.. .	....	....	...	....	....
33	....	50	12	*100*	60	....	*100*	....	27	50	70	....	....	.. .	....	....	....	11	....
33	16	....	12	50	60	....	*100*	....	*80*	*100*	42	50	20	....	*100*	....	....	44	22
....	8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
...	8	....	2	....	....	....	....	....	27	..	7	....	....	...	....	....	....	33	11
....	8	...	....	....	.	....	....	....	....	....	14	....	....	....	....	....	....	11	....
....	....	....	..	....	....	....	....	....	27	....	...	...	20	...	....	.. .	...	....	.. .
...	40	....	...	...	20	....	....	....	..	....	14	....	. .	....	....	....	...	11	....
....	....	....	12	..	....	....	....	....	....	....	....	..	....	....	...	....	....	. ..	....
66	*88*	50	*96*	50	*100*	....	*100*	....	*81*	*100*	*91*	*100*	60	50	*100*	*70*	60	*99*	*77*
....	8	...	.. .	....	....	..	....	....	....	....	7	....	....	....	...	....	12	11	....
33	*80*	...	48	....	20	....	....	....	....	50	21	50	60	50	50	....	....	77	44
33	24	....	.. .	....	40	....	....	....	....	....	28	....	40	....	50	50	....	44	55
66	56	50	48	*100*	40	....	*100*	....	*81*	*100*	*91*	*100*	60	50	*100*	*75*	48	*88*	*77*
.. .	32	....	24	....	40	...	....	....	9	....	21	...	40	...	*100*	50	....	22	33
....	....	....	...	....	...	....	....	....	9	....	14	....	....	....	....	25	....	...	....
66	*80*	50	60	50	*80*	....	*100*	....	54	*100*	56	*100*	60	50	*100*	*75*	24	*99*	*77*

Tables Showing the Relative Value of Varieties in

VARIETY NAME.	UPPER AUSTRAL.											
	Wood.	Ritchie.	Lewis.	Wirt.	Jackson.	Roane.	Calhoun.	Gilmer.	Braxton.	Mason.	Putnam.	Kanawha.
COMMON APPLES—Conttnued.												
Fall Wine	14	10	54	....	12	5	*70*	....	40	7	7	....
Fameuse	14	....	....	....	8	5	....	....	....	14	14	10
Fanny	....	....	....	....	....	....	....	....	....	7	7	....
Gano	14	....	....	28	8	....	10	....	....	14	7	....
Gilpin	....	....	....	....	....	10	....	....	....	....	....	....
Golden Sweet	14	40	36	28	64	55	40	42	60	42	49	30
Gravenstein	....	....	6	14	16	5	....	14	....	7	....	10
Green Cheese	....	....	....	....	....	5	....	....	....	....	7	....
Green Newtown	....	....	....	....	4	....	....	14	....	....	....	10
Grimes Golden (Native)	42	50	48	*84*	*72*	*70*	50	*70*	60	56	49	60
Haas (Fall Queen)	14	....	....	....	4	....	....	....	....	....	....	....
Hewes Crab	28	....	....	14	20	....	10	....	....	35	21	40
Higby	....	....	....	....	....	....	....	....	....	....	....	....
Highton Sweet	14	....	6	....	4	....	....	....	....	14	7	....
Horse	....	....	6	....	....	10	....	....	....	....	....	10
Hubbardston	28	15	....	....	20	10	....	....	....	14	14	....
Huntsman	....	....	....	....	....	....	....	....	....	7	....	....
Jersey Sweet	14	....	12	....	20	15	40	14	....	....	....	10
Jonathan	14	10	6	42	28	5	....	14	20	....	....	10
Junaluskee	....	....	....	....	....	....	....	....	....	....	....	....
Kent Beauty	....	....	....	....	....	5	....	14	....	....	....	....
Keswick	....	....	....	....	4	....	....	....	....	....	....	....
Kinnaird	....	....	....	....	....	....	....	....	....	....	....	....
Lansingburg	....	....	....	....	....	....	....	....	....	....	....	....
Lawver (Delaware Red Winter)	14	20	....	28	20	10	20	....	....	7	....	10
Limber Twig	....	10	30	28	28	45	20	14	60	35	35	60
McAfee	....	....	....	....	....	5	....	....	....	....	....	....
Maiden Blush	*70*	60	*72*	84	*80*	*70*	60	*84*	60	56	*70*	*80*
Mangum	....	....	....	....	....	....	....	....	....	....	....	....
Margaret (Early Red)	....	....	....	....	....	....	....	14	....	....	....	....
Moore Sweet	....	....	6	....	4	10	10	....	....	....	7	10
Munson	....	....	....	....	....	....	....	....	....	....	....	....
Nansemond	14	....	24	....	....	5	....	....	20	7	7	10
Nickajack	14	10	42	14	44	20	10	56	60	35	14	20
Northern Spy	56	50	66	*98*	*84*	60	*70*	*70*	80	*70*	35	40
Northwestern Greening	....	....	12	....	....	5	....	....	....	....	7	10
Oconee	....	10	....	....	....	....	....	....	....	....	....	....
Oldenburg, Duchess of	28	10	36	28	28	15	30	14	40	21	42	20

the Life-Zones and Counties of the State.

UPPER AUSTRAL.

Clay.	Cabell.	Lincoln.	Wayne.	Logan.	Mingo.	Wyoming.	McDowell, west half.	Mercer, east half.	Summers.	Fayette.	Monroe.	Greenbrier, east half.	Mineral, east two-thirds.	Grant, east half.	Pendleton.	Hampshire, N. E. one-third.	Morgan.	Berkeley.	Jefferson.
....	8	....	12	....	....	....	....	....	9	....	7	....	40	....	....	25	24	....	11
....	....	....	....	....	....	....	....	....	....	....	21	....	20	....	....	....	....	11	....
....	8	....	....	....	....	....	....	....	....	....	7	....	....	....	....	....	....	....	....
....	8	....	....	....	....	....	....	....	9	....	14	....	....	....	....	....	....	55	....
....	....	....	....	....	....	....	....	....	....	....	14	....	....	....	....	....	....	....	....
66	40	....	24	50	40	....	....	....	14	*100*	*77*	*100*	*80*	50	*100*	....	48	55	....
....	8	50	12	....	20	....	*100*	....	22	....	21	....	....	50	*100*	....	12	33	33
....	8	....	....	....	....	....	....	....	15	50	14	....	....	....	50	....	....	....	55
....	16	....	....	....	....	....	....	....	9	....	7	....	20	....	50	....	12	22	....
33	*80*	5	60	50	60	....	*100*	....	27	*100*	*77*	*100*	40	....	....	....	36	*99*	33
....	24	....	12	....	20	....	....	....	....	....	21	....	....	....	....	....	....	22	77
....	24	....	....	....	20	....	....	....	....	....	....	....	....	....	....	....	....	22	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	8	....	36	50	....	....	*100*	....	....	....	21	....	20	....	....	....	....	....	....
....	....	....	12	....	....	....	....	....	....	....	14	*100*	....	....	....	....	....	....	22
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	11	....
....	16	....	....	....	....	....	....	....	9	....	7	50	20	....	....	....	....	11	....
....	16	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	24	44	22
....	8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	16	....	....	....	....	....	....	....	9	....	14	....	....	....	....	....	....	11	....
....	....	....	12	....	....	....	....	....	....	....	14	....	....	....	....	....	....	....	....
....	....	....	....	....	20	....	....	....	....	....	....	....	....	....	....	....	....	....	....
....	8	....	....	50	20	....	*100*	....	....	50	28	....	20	....	....	....	....	22	11
66	56	50	36	50	60	....	....	....	81	....	56	*100*	20	....	....	50	12	33	*77*
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
66	*88*	50	*96*	50	*80*	....	....	....	*72*	50	*70*	50	60	50	*100*	*75*	24	*99*	66
....	....	....	....	....	....	....	....	....	....	....	14	....	....	....	....	....	....	....	....
....	....	....	....	....	20	....	....	....	....	....	....	....	....	....	....	....	....	11	11
....	8	....	....	....	....	....	....	....	9	....	....	....	....	....	....	....	....	22	11
....	....	....	....	....	....	....	....	....	....	....	7	....	20	....	....	....	....	11	....
....	16	....	....	....	....	....	....	....	45	....	21	....	20	....	*100*	....	....	33	33
33	32	50	....	50	60	....	*100*	....	36	*100*	49	....	....	....	....	....	....	11	11
33	64	50	*84*	56	60	....	*100*	....	63	50	*84*	*100*	*80*	50	*100*	50	36	*88*	66
....	....	....	....	....	....	....	*100*	....	....	50	7	....	....	....	....	....	....	22	....
....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
66	24	....	36	....	40	....	....	....	36	50	42	50	40	....	....	....	24	55	22

Table Showing the Relative Value of Varieties in

VARIETY NAME.	UPPER AUSTRAL.											
	Wood.	Ritchie.	Lewis.	Wirt.	Jackson.	Roane.	Calhoun.	Gilmer.	Braxton.	Mason.	Putnam.	Kanawha.
COMMON APPLES—Continued.												
Ortley	....	....	....	....	....	....	....	....	....	....	....	....
Paragon	....	....	....	....	8	10	....	....	....	....	7	....
Pewaukee	14	....	18	....	20	....	30	....	....	14	....	10
Porter	....	30	....	....	....	15	10	28	....	....	....	....
Primate	....	....	....	....	....	....	....	....	....	....	7	....
Pryor Red	....	....	....	....	....	5	....	14	....	21	7	20
Pumpkin Sweet, Pound Sweet	14	40	48	28	60	50	50	*70*	40	28	21	40
Rails Genet	28	20	36	28	....	20	20	28	....	35	7	60
Rambo	56	40	84	*89*	*84*	*75*	60	*70*	80	56	*77*	50
Ramsdell Sweet	....	....	....	....	....	....	....	....	....	....	7	10
Red Astrachan	56	30	18	*84*	64	50	30	28	20	35	*77*	60
Red Canada	14	....	....	....	8	5	....	....	....	....	....	10
Red June	28	1	18	28	28	25	20	28	40	28	14	50
Red Stripe	....	....	6	14	8	10	20	....	....	....	....	20
Rhode Island Greening	28	30	60	42	36	20	40	56	20	28	49	20
Rome Beauty	56	60	*78*	*70*	*76*	*90*	*100*	*84*	100	*77*	*91*	*80*
Roxbury	42	20	30	42	24	40	20	42	....	42	22	40
Shockley	14	....	....	....	8	20	....	....	....	7	7	30
Shackelford	....	....	....	....	4	....	....	....	....	7	....	....
Smith's Cider	*70*	....	6	42	68	25	10	....	....	49	49	50
Smokehouse	14	....	60	28	20	15	10	42	60	....	21	20
Sops of Wine	14	....	....	....	20	5	20	....	40	7	....	....
Stark	42	....	6	28	32	20	30	14	20	28	28	10
Stephenson	....	....	....	....	....	....	....	....	....	....	....	....
Summer King	....	....	6	14	4	5	10	....	....	....	....	....
Summer Pearmain	14	20	12	28	12	35	....	....	40	21	7	20
Summer Queen	14	10	12	....	8	5	....	14	....	....	....	....
Summer Rose	....	....	....	....	4	10	....	....	....	....	....	....
Tetofski	14	....	6	14	12	....	....	....	....	....	14	....
Tompkins King	....	30	36	43	28	40	30	....	60	35	49	*70*
Townsend	....	....	....	....	....	....	10	....	....	....	....	....
Twenty Ounce	14	20	36	28	40	30	50	14	40	7	21	60
Vandevere	28	30	12	*70*	24	50	40	14	....	21	....	40
Virginia Greening	....	....	6	....	4	....	....	....	....	....	7	20
Walbridge, Edgar Red Streak	....	....	18	....	16	5	10	....	....	7	14	....
Wealthy	14	10	18	56	40	5	30	14	40	28	21	20
White June Eating	....	....	6	....	4	....	10	....	....	7	7	20
White Paradise	14	....	....	....	....	....	....	....	....	....	....	....

the Life-Zones and Counties of the State.—Continued.

UPPER AUSTRAL.

Clay.	Cabell.	Lincoln.	Wayne.	Logan.	Mingo.	Wyoming.	McDowell, west half.	Mercer, east half	Summers.	Fayette.	Monroe.	Greenbrier, east half.	Mineral, east two-thirds.	Grant, east half.	Pendleton.	Hampshire, N.E. one-third.	Morgan.	Berkeley.	Jefferson.
....	....	....	....	....	....	....	....	....	..	....	7	....	....	....		....	....	....	....
..	....	....	12	....	....	....	....	....	....	....	14	....	....	....	....	....	....	....	....
....	16	....	....	....	..	....	....	....	....	..	7	....	..	....	....	....	12	11	....
....	....	....	12	....	....	....	....	....	27	50	14	50	....	....	....	....	....	....	....
....	8	....	....	....	....	....	....	....	....	....	14	....	....	....	....	..	..	11	....
33	24	....	....	....	..	....	....	....	9	....	7	....	....	..	100	....	....	11	33
66	16	....	....	50	....	....	....	....	9	....	56	100	40	....	....	50	21	33	33
....	32	50	36	100	20	....	100	....	81	50	84	100	40	50	100	25	..	22	66
33	96	50	72	....	40	....	100	....	54	....	56	100	80	50	100	75	24	88	77
..	....	....	....	..	....	....	....	....	....	..	....	....	....	....	....	....	12	....	....
33	56	50	96	50	20	....	50	....	18	50	56	100	60	50	100	50	24	77	77
..	..	....	....	..	..	....	....	....	....	....	11	....	....	....	....	....	..	....	11
66	16	50	48	50	20	....	....	....	63	50	49	50	60	....	....	....	....	44	33
..	8	..	....	50	20	....	....	....	....	....	7	....	20	....	.	....	....	44	....
..	5	....	24	....	20	....	100	....	18	50	70	100	60	50	100	50	24	44	33
66	88	50	96	100	80	....	100	....	81	100	70	100	80	....	100	25	12	33	66
....	32	....	36	....	20	....	..	....	....	50	49	50	40	....	100	....	12	22	55
....	8	..	....	100	40	..	....	....	27	....	56	....	..	....	....	....	....	11	....
....	....	....	....	....	..	....	....	..	....	....	7	....	....	....	....	....	....	11	....
33	88	....	60	50	....	....	....	....	18	50	56	50	....	..	..	....	12	55	55
..	8	....	12	....	20	..	100	....	72	50	84	100	60	50	100	50	60	88	66
33	16	50	....	....	....	....	100	....	36	50	42	....	..	....	....	..	....	22	....
....	24	50	12	....	20	....	....	..	9	....	21	....	.	....	....	....	12	44	11
	....	....	....	....	....	....	....	....	9	....	....	..	....	....	....	.	..	11	....
....	....	....	....	....	20	....	....	..	....	....	7	..	....	....	....	....	....	11	11
33	32	.	24	50	40	....	....	....	36	....	56	....	....	....	....			22	22
....	16	....	....	....	20	....	....	....	....	50	21	....	20	....	....	.	48	66	55
....	8	....	....	....	....	....	....	....	9	....	14	..	20	....	....		....	....	22
..	24	....	24	....	....	....	....	....	9	50	21	....	40	....	.	.. .	24	44	..
33	32	50	12	50	20	....	....	....	18	50	35	100	....	50	....	....	....	33	44
....	....	....	....	....	..	....	....	....	....	..	....	....	....	....	....	....	..	11	....
....	48	50	48	....	60	..		....	36	50	35	..	40	....	....	50	24	44	44
66	8	....	....	50	....	....	....	..	9	....	14	....	40	50	....	25	24	77	55
....	....	....		....	....	....	....	....	9	....	....	....	....	....	..	....	.	11	33
....	8	..	..	50	....	....	..	....	....	....	14	....	20	50	..	....	24	....	22
33	48	....	24	50	....	..	....	....	18	50	35	100	20	....	..	.	....	11	....
....	....	....	12	....	40	..	....	....	....	....	....	....	....	....	....	25	12	33	11
..	....	....	....	....	20	....	....	....	9	....	....	....	....	....	....	....	12	88	33

Table Showing Relative Value of Varieties in

VARIETY NAME.	UPPER AUSTRAL.											
	Wood.	Ritchie.	Lewis.	Wirt.	Jackson.	Roane.	Calhoun.	Gilmer.	Braxton.	Mason.	Putnam.	Kanawha.
COMMON APPLES—Continued.												
White Pearmaine	....	...	....	....	8	5	...	....	...	....	7	....
White Pippin	28	20	....	....	12	5	....	28	....	14	7	20
Willow Twig (native)	14	10	6	28	40	35	20	...	....	21	21	20
Wine Hays	14	....	....	....	....	....	....	....	....	....	....	....
Winesap	42	60	*66*	*70*	*72*	65	*80*	*84*	*80*	56	56	50
Yellow Bellflowrr	56	60	66	*70*	56	60	*80*	56	40	56	77	60
Yellow June	....	....	54	....	8	5	....	28	....	7	....	10
Yellow Transparent	28	40	54	42	60	45	30	....	40	42	63	50
Yellow (New Town) Albemarle Pippin	14	30	12	28	8	....	....	...	20	21	....	....
York Imperial	14	20	36	28	8	5	30	28	...	14	14	20

the Life-Zones and Counties of the State.—Continued.

UPPER AUSTRAL.

Clay.	Cabell.	Lincoln.	Wayne.	Logan.	Mingo.	Wyoming.	McDowell, west half.	Mercer, east half	Summers.	Fayette.	Monroe.	Greenbrier, east half.	Mineral, east two-thirds.	Grant, east half.	Pendleton.	Hampshire, N.E. one-third.	Morgan.	Berkeley.	Jefferson.
33	..	....	....	...	....	...	...	...	....	....	7	...	...	....	..	....	12	11	11
...	8	....	....	...	..	....	..	....	....	...	35	*100*	20	....	....	25	...	44	11
....	16	50	12	....	20	....	...	....	....	....	14	50	20	...	...	....	24	11	33
....	...	....	....	....	....	....	....	....	..	..	....	....	....	..		...	....		...
66	*72*	50	60	*100*	*80*	100	....		*81*	50	*70*	....	40	50	*100*	50	36	*88*	*77*
66	56	50	60	50	60	....	..	.	36	*100*	*91*	*100*	60	50	*100*	25	12	66	55
...	16	....	12	50	20	100	....	....	18	...	7	..	20	....	*100*	25	12	33	22
....	*72*	50	72	50	60	....	....	....	54	*100*	42	*100*	60	50	...	25	36	66	44
..	16	50	12	....	20	100	...	...	27	50	49	..	20	....	....	*75*	12	44	*88*
33	24	....	12	50	40	....	....	..	18	50	*70*	50	60	50	...	50	48	*99*	*77*

BARBOUR COUNTY.

TABLE FRUITS.	MARKET FRUITS	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING	SCAB.
Varieties held in highest esteem for eating out-of-hand	Sorts having best form, color and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market	Varieties which bear most regularly. Underscored bear annually.	Sorts which suffer most from	Varieties most exempt from scab.	Varieties which suffer most from scab.
Ohio Beauty	Ben Davis	Grindstone	Fallawater		Ben Davis	Wine Apple.
Rambo.	Grimes Golden	Ben Davis	Red Astrachan		Grind stone.	
Early Harvest	Winter Russet	York Imperial, or Johnson's Fine Winter	Ben Davis.			
Ben Davis	Grind Stone	Rome Beauty	Grind Stone.			
August Sweet.	Baldwin	Baldwin	Early Harvest.			
Pumpkin Sweet	Fallawater	Pennock	Rambo.			
Northern Spy	York Imperial	Black Apple	Spice Apple.			
Grimes Golden.	Pennock	Grimes Golden	July Sweet.			
Wine Apple	Golden Russet	Tompkins King	Waldower or Fallawater.			
July Sweet.	Tompkins King	Ladies' Blush	Sweet.			
Winesap	Red Astrachan		Fall Wine Sap.			
York Imperial	Twenty Ounce		Rome Beauty.			
Fallawater.						
Fall Wine.						
Red Astrachan						
Long Stem.						
Golden Russett						

The apple regions of Barbour county seem to lie in two areas of about equal extent, separated from one another by the Tygart's Valley river and its tributaries. The high lands of the county both east and west of the course of this river are reported as successful apple producing areas. The display of the county's fruit at the Philippi Fair in the fall of 1899 was an emphatic corroboration of the suitability of the soil and climate to apple growing. The size, color, quality and variety of fruit displayed was enough to convince the most skeptical that orcharding could be made a profitable industry in the county Our inquiry shows that the orchards bearing most regularly and abundantly occupy the hill sides or hill tops, and that the exposure is usually a southeasterly one.

BERKELEY COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellars in fit condition for April market	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Yellow Bellflower	York Imperial	Ben Davis	Fallawater			White Pearmin.
Rambo	Ben Davis	Jonathan	Yellow Bellflower			Fall Jeneting.
Baldwin	Jonathan	York Imperial	Smokehouse			Early Harvest.
Spitzenburg	Winesap	New Town Pippin.	Vandevere			New Town Pippin.
York Imperial	New Town Pippin.	Nero	Pound Sweet			Romanite.
R. I. Greening	Carthouse	Stark	York Imperial			Rambo.
Winesap	Red Astrachan	Winesap	Ben Davis			Early Ripe.
Paradise	Baldwin	Carthouse	Early Harvest			Grimes Golden.
Yellow Pippin	York Stripe	Green Pippin	Carthouse			Pearmain.
Grimes Golden	Mam. Black Twig.	Grindstone	Early Ripe			Greening.
Vandevere	Maiden Blush	Smokehouse	Maiden Blush			Northern Spy.
Gravenstein	Red Stripe	Grimes Golden	Baldwin			Black Arkansas.
Smokehouse	Pound Pippin	Baldwin	Fall Jeneting			Missouri Keeper.
New Town Pippin.	Greening	Northern Spy	Grimes Golden			
Early Strawberry	Grimes Golden	Black Twig	Tompkins King.			
Yellow Transparent	Shackelford	Am. Blush.				
Pound Pippin	Northwestern Greening.	Fall Jeneting.				
Jonathan.		Carlough Sweet.				
Arkansas Beauty.						

In no section of our State is apple culture given more attention than in Berkeley county. This section enjoys the advantage of being a part of the famous Albemarle Pippin region of Virginia, as well as sharing in the wonderful peach development of the sister State across the Potomac. In regard to soil and climate no other portion of the State is better adapted to fruit growing than the eastern counties of the State, of which Berkeley is one. Transportation facilities are good, and, besides this, the one large commercial cold-storage house of the State which is devoted exclusively to the fruit business is located at Martinsburg. The range of hills extending in a northeast and southwest direction across the county, and known as the Apple-Pie Ridge, is the most famous orchard region of the State. The John Miller orchard, which caused so much newspaper discussion in the fall of 1897, is located upon this ridge. In fact, the horticultural growth of the county is largely the outcome of the successful efforts of W. S. Miller, who may justly be called pioneer horticulturist of West Virginia. From him have come a brood of successful, up-to-date orchardists, who are the guidin

spirits in the present rapid advacement of fruit growing in the Eastern Pan-Handle. Orcharding is given an important place among the pursuits of the county, and the acreage is increasing rapidly. The methods of culture, pruning and spraying practiced are kept well up with the advancements along such lines. The methods of harvesting and disposing of the fruit can be improved so as to bring a larger return to the producer. This will correct itself when the young orchards now being planted reach bearing age. While the present aggregate crop is large, the product of any individual orchard is not sufficient to justify the erection of special storehouses for holding the crop. At present the fruit is sold to buyers, sometimes at auction and sometimes at private sale. The grower in that case has no responsibility further than placing the fruit upon the car for shipment. While this guarantees a fair profit and a quick return, it does not always give the grower the greatest net return. Neither does it keep him interested in the crop from season to season, as does the practice of holding the fruit in store on the farm.

The class of varieties grown in the orchards of this region differ widely from those of the Ohio River region, yet each group is eminently suited to its particular environment. The soil of that part of the county in which apple growing is most extensively carried on is what is known as the "Martinsburg Shale." It is really a soil formed by the breaking down of a shale rich in iron, phosphorus, and potash. It is well drained naturally, and forms an ideal situation for the roots of fruit trees. This ridge of shale is flanked on the east as well as on the west by a soil rich in lime, and in many places there is a goodly admixture of the lime and shale. The apple does well upon these soils as well as upon those more largely composed of shale. The heavy soil containing lime and shale is also eminently suited to pear culture.

BOONE COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rambo.....	Ben Davis.....	Russet.....	Pound Royal.			
Red Astrachan.....	Virginia Greening	Ben Davis.....	Rambo			
Pound Royal.....	Smokehouse.....	Ralls Genet.....	Ralls Genet.			
Summer Pearmain.	Limber Twig.....	Limber Twig.....	Vandevere.			
	Fall Wine.....	Nickajack.				

The soil and climate of Boone county are such as to make it a foremost fruit producing county In fact, it now produces an abundant supply for home consumption. With railroad facilities the apple industry would undoubtedly quickly become an important commercial factor. Reports indicate that those portions of the couuty by the Coal and Little Coal rivers are well suited to apple culture. The valleys of these rivers are, however, less adapted to commercial apple culture than the high lands, as indicated on the map.

BRAXTON COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having bes form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Early Harvest.....	Ben Davis.....	Grindstone.....	Rome Beauty	Pound Royal....	Grindstone.	
Rambo	Rome Beauty.....	Ben Davis.....	Maiden Blush.....	Northern Spy...	Rome Beauty.	
Pound Royal.....	York Imperial, or Johnson's F. Winter.	Rome Beauty.....	Early Harvest.....	Seek-no-Further.	Never Fail.	
Russet	Grimes Golden....	York Imperial, or Johnson's F. Winter.	Ohio Harvest.....	.....	June Sweet.	
Yellow Transparent.	Black Apple.....	Pennock.....	Winesap	.....	Ben Davis.	
Rome Beauty	Grindstone.....	Fallawater	Ben Davis			
Smokehouse.....	Rambo.....	Grimes Golden....	Limber Twig.			
Winesap.....	Northern Spy.....	Milam	Rambo.			
Ben Davis	Wagener.....	Jeneting.....	Pennock.			
Ogdenburg, Duchess of.	Winter Pippin....	Salman's Sweet...	Yellow Transparent.			
Limber Twig.....	R. I. Greening.....	.....	Northern Spy.			

The geographical position of Braxton county deprives it of one of the important natural factors which has so largely contributed to the upbuilding of horticultural industries in the counties along the Ohio and its navigable tributaries,—*i. e.*, cheap transportation. The limited milage of railroad through the central counties of the state has a tendency to hold in check all horticultural development save that which caters to local demand only.

While Braxton may not become an important rival in apple culture for many years, she nevertheless possesses a soil and climate which renders the future development of a very considerable commercial orchard area possible.

Reports indicate that the whole of the county lying south of Elk River is well suited to apple culture. The contour of the country as well as its general elevation suggests equally as good areas north of the river, particularly in the southwest part along the Clay county line. While there are no commercial orchards reported, the fruit list indicates that the standard commercial sorts do well and that the present orchard area is sufficient to more than supply the home market.

BROOKE COUNTY.

ABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varieties which keep in pits or cellars in fit condition for April market.	Varieties which bea most egu ar ly—underscored bear annually	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rambo	Rome Beauty	Grindstone	Baldwin	Russet	Baldwin	Rambo.
Grimes Go den	Ben Davis	Ben Davis	Rambo	Baldwin	Northern Spy.	Rome Beauty.
Baldwin	Stark	Roxbury Russet	Grimes Golden	Bough, Sweet	Roxbury Russet.	Ralls Genet.
Northern Spy	Pearmain	Rome Beauty	Pound Royal	R. I. Greening	Rambo	R. I. Greening.
New Town Pippin	Baldwin	Stark	*New Town Pippin*		Rome Beauty	Newtown Pippin
Maiden Blush	Willow Twig	Baldwin	*Golden Russet*			
Fameuse	Grimes Golden	Pearmain, Winter	Maiden Blush			
Jonathan	Rambo	Smith's Cider	Winter Pearmain.			
Italian Rose	New Town Pippin.	Red Romanite	Roxbury Russet			
Pound Royal	Bentley Sweet	Ralls Genet	Northern Spy			
Gravenstein		Rambo	Ralls Genet			
Bough, Sweet						

Brooke county is one of the four counties comprising that remarkable part of West Virginia which Penn left off his quadrangle in outlining Pennsylvania. Fortunately for West Virginia, we possess in that narrow neck of country one of our most important commercial horticultural centres as well as our most important market. Horticulture in order to thrive has to have certain stimulating influences, chief among which are proximity to good markets or adequate transportation facilities Both these are enjoyed by the northern Panhandle counties of our State. The great industrial development along the Ohio river has built up many towns ranging in population from 200 to 2,000 people; they make large demands upon the neighborhood for both fruits and vegetables. These towns, together with Wheeling, the metropolis of the State, offer unusual inducements for truck and small fruit industries. The apple business, however, is not so much influenced by the local population as by transportation, and we shall see that the cheap means afforded by the Ohio river for getting apples to down stream points has undoubtedly had a marked influence on the development of the apple business in all the river counties. This, together with a congenial soil and climate makes the counties of Hancock, Brooke, Ohio, Marshall and those to the south alone the Ohio river a veritable paradise for the apple grower. In Brooke county apples thrive well upon the hillsines as well as a ong the river front, yet the fine grazing offered by these strong lands have kept them well populated with sheep, and although there are a number of good commercial orchards in the county it is by no means one of the leading industries, as it is in Hancock county. As is described by the map, the whole county is adapted to apple culture, but the western portion is best suited to the commercial industry.

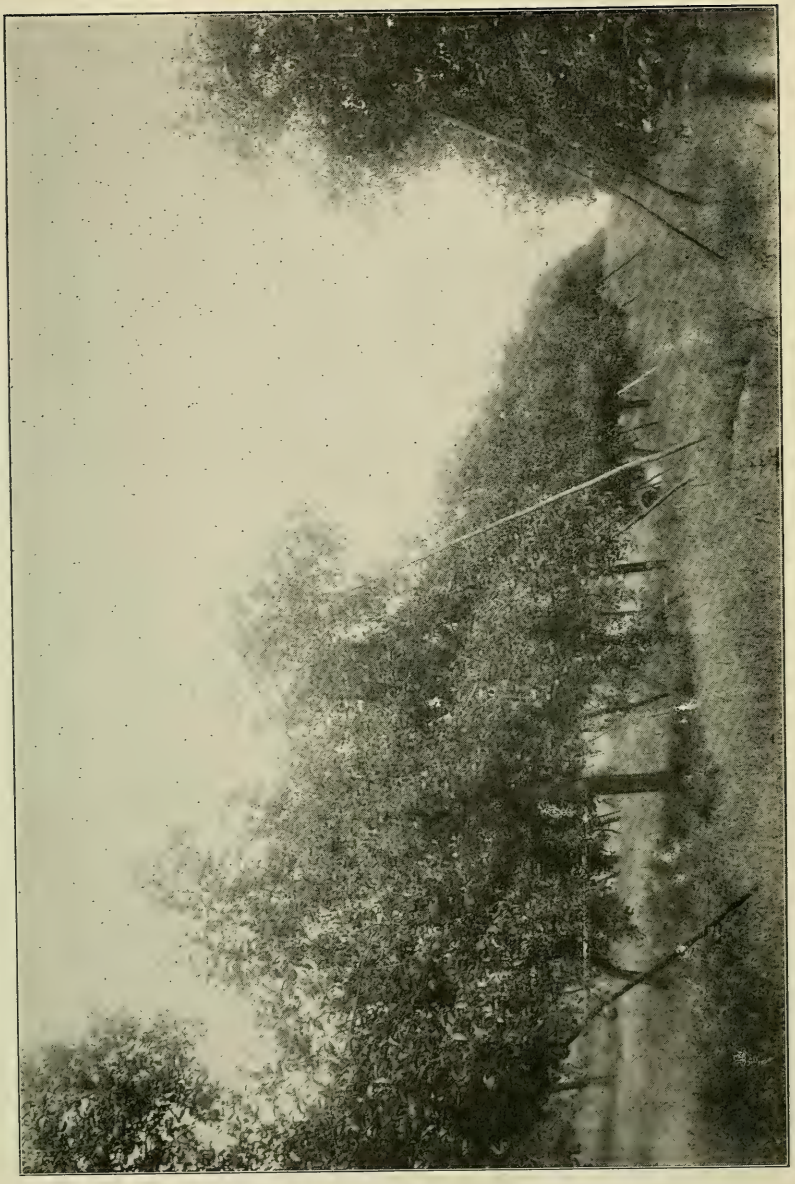

FIG. 9—ROME BEAUTY ORCHARD.

CABELL COUNTY.

TABLE FRUITS.	MARKET FRUITS,	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Pound Royal	Rome Beauty	Ben Davis	Early Chandler	Rome Beauty	Winesap	Rome Beauty.
Early Harvest	Ben Davis	Rome Beauty	Pound Royal		Maiden Blush	Ben Davis.
Rome Beauty	York Imperial	Grindstone	Ben Davis		Yellow Transparent.	Golden Drop.
Ben Davis	Grimes Golden	York Imperial	Smith's Cider		Winter Pearmain	Gano.
Smith's Cider	Red Vandevere	Winter Pearmain	Rome Beauty		Ben Davis.	
Bethlehemite	Maiden Blush	Willow Twig	Nickajack.			
Roman Stem	Winter Pearmain	Winesap	Grimes Golden.			
Maiden Blush	Rambo	Wealthy	Winesap.			
Grimes Golden	Smith's Cider	Baldwin	Maiden Blush.			
Fallawater	Winesap		Ralls Genet.			
Northern Spy	Nickajack		Yellow Transparent.			
Bough, Sweet	Baldwin		Early Harvest.			
Yellow Transparent.	Yellow Transparent,	Gano	Gano.			
*Red Harman	Pound Royal	New Town Pippin.	Golden Drop.			
New Town Pippin.	*Red Harman	R. I. Greening	Chenango.			
Fanny	New Town Pippin.	Smith's Cider	Wagener.			
Tetofsky	Yellow Bellflower.	Russet	Keswick.			
Golden Sweet	Russet		Smith's Seedling.			
Early Strawberry			Fall Jenneting.			
Winter Pearmain			Wealthy.			
Rambo			York Imperial, or Johnson's Fine Winter.			
Yellpw Bellflower			Bryan's Beauty.			
Russet			*Winter Pearmain.*			
York Imperial.						
Pumpkin Sweet,—Pound Sweet.						
Cooper, or Lady Washington.						*Local sorts.

Cabell county shares the reputation of her sister counties along the Ohio river, and has within her boundary twenty or more commercial orchards. The nearness to all down-river points and the facility afforded by the Ohio for reaching them, together with the freight traffic of the main line of the C. & O., afford the county unusually good transportation. Reports indicate that the best orchards are located on the more elevated portions of the county, and that practically the entire area, except the low river front, is adapted to orcharding. Commercial orchards are reported from the vicinity of Huntington, Union Ridge, and Green Bottom. The variety list here reported is quite extended and shows the large number of varieties held in high esteem as well as giving a wide choice to the prospective planter.

CALHOUN COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annualy.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Early Harvest	Ben Davis	Grindstone	Ben Davis	Winesap	Ben Davis	Red Vandevere
Maiden Blush	Rome Beauty	Rome Beauty	Rome Beauty	English Russet	Rome Beauty	Pennock
Fall Rambo	York Imperial	Ben Davis	Early Harvest	Goleen Sweet	Red Pippin	Pumpkin Sweet
Rome Beauty	Vandevere	Spitzenburgh	Fall Pippin	Maiden Blush	Winesap	
Golden Sweet	Baldwin	English Russet	Baldwin	Wealthy	Pound Sweet	
Grimes Golden	Winesap		Grindstone	YellowBellflower	Grindstone	
Yellow Bellflower	Yellow Transparent	Winter Rambo	Early Chandler	Stark	Northern Spy	
Pound Sweet	Northern Spy	Grimes Golden	Northern Spy	June Eating	Fall Pippin	
Golden Russet	Fall Pippin	Alexander	Rambo	Belmont	English Russet	
Winesap	Waldower	Gano	Grimes Golden	Red Vandevere	Maiden Blush	
Early Harvest	Alexander	Vandevere	R. I. Greening	Rome Beauty		
Fall Pippin	English Russet	Bentley Sweet	Alexander.			
Fall Wine	Gano	Romanite	Never-Fail.			
Wealthy	Early Strawberry.	Northern Spy	Winesap.			
Pumpkin Sweet	Peck's Pheasant	Pennock	Cooper.			
	Rambo.					
	Bentley					
	Grindstone.					

The only avenue by which the products of the county can reach the market without a long overland trip is the Little Kanawha river. The facilities offered by this stream are by no means sufficient to warrant growers in risking perishable products to it. This state of affairs precludes the possibility of profitable commercial orcharding. The county, however, reports the northern third as adapted to the industry while the water courses and the contour of the country indicate that there is also a likely section in the southwestern portion of the county as is shown by the red on the map. The varieties reported are among the best dessert and market sorts grown in the State, and with good railroads this county would undoubtedly soon be in the list of commercial apple growing counties.

CLAY COUNTY.

TABLE FRUITS.	MARKET FRUITS,	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Vandevere	Ben Davis	Ben Davis	Limber Twig	Vandevere	Yellow Bellflower	Vandevere.
Twenty Ounce	Rome Beauty	Rome Beauty	Ben Davis	Ben Davis	Yellow Transparent.	Ben Davis.
Rome Beauty	Romanite	Romanite	Yellow Transparent.	Limber Twig	Twenty Ounce	Limber Twig.
Yellow Bellflower	Abram	Green Russet	Rome Beauty	Rome Beauty	Rambo	Rome Beauty.
Wealthy	Limber Twig	Abram	Fall Pippin	Baldwin	Rome Beauty.	
Ben Davis	Green Russet	Siberian Crab	Vandevere	Golden Sweet.		
Fallawater	Winter Sweet		Maiden Blush.			
Rambo	Siberian Crab.					
	Grindstone.					

Reports from Clay indicate that practically the whole county is more or less suited to apple culture, A topographic survey, however, would indicate that the areas covered by the red on the map will prove best suited to this industry. Commercial orcharding in the county is at present only in its infancy, as railroad facilities are only afforded through the western half of the county. With the extension of the West Virginia Central Railroad the remainder of the county will be afforded shipping facilities which will undoubtedly develop more or less of a commercial orchard industry. The standard commercial sorts are reported as doing well, and with modern methods certain portions of the county, if not the whole, should grow profitable orchards.

DODDRIDGE COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from blight.	Varieties which suffer most from scab.
Rome Beauty	Rome Beauty	Grindstone	*Rome Beauty*	Pennock	Rome Beauty	Limber Twig.
Golden Pippin	Ben Davis	Ben Davis	Porter	Roman Beauty	Ben Davis	Willow Twig.
Fallawater	Baldwin	Rome Beauty	White Long Island	Baldwin	Rambo.	
Porter	Grimes Golden or Golden Pippin	Ralls Genet	R. I. Greening	Rambo.		
Northern Spy	Maiden Blush	York Imperial	Ben Davis	Early Harvest.		
Early Harvest	Rambo	Romanite	Rambo	Sweet Russet.		
Golden Sweet	Russet	Bentley Sweet	Yellow Bellflower.			
Roxbury	Shannon	Winesap	Early Harvest.			
Baldwin	Black (Jersey)	Winter Russet	Baldwin.			
Fall Rambo	Yellow Bellflower.	Baldwin	Fallawater.			
Winter Russet		Nanson Beauty	Shannon Pippin.			
Lowell		Missouri Pippin	Grindstone.			
Early Bow			Black (Jersey).			
			Greening.			

The commercial apple development in this county has already reached a point of marked importance, and although the outlet for the fruit is only afforded by rail yet the Parkersburg branch of the B. & O. offers ample shipping facilities. Although the crop for 1898 was a loss because of the late heavy freezes of that year, there are in general few losses from such causes. The industry has already passed the experimental stage and may be considered as established. As indicated upon the map, reports show the whole county to be suited to apple culture. The contour would indicate that the extreme western border may be found to be somewhat less adapted to the industry than the remainder of the county. This, however, may not prove to be the fact in practice. The sorts reported show sufficient variety to suit the most exacting taste as well as including a good selection for market.

FAYETTE COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from blight.	Varieties which suffer most from scab.
Porter	Ben Davis	Ben Davis	*Fallawater*	Milam	Fallawater	Rome Beauty.
Rambo	Rome Beauty	Rome Beauty	*Porter*	Twenty Ounce	Grimes Golden	Early Ripe.
Grimes Golden	York Imperial	York Imperial	*Milam*		Rambo	Early Harvest.
Winesap	Vandevere	New Town Pippin.	*Rambo*		Porter	New Town Pip.
Oldenburg, Duchess of.	Maiden Blush	Rall's Genet	*Winesap*		Winesap	Winesap.
Yellow Transparent.	Red Astrachan	Nickajack	*Ben Davis.*			
Northern Spy	Yellow Transparent.	Milam	*Northern Spy.*			
Pearmain	Rambo	N. W. Greening	*Rome Beauty.*			
Rome Beauty	Wealthy	Winesap	*Red Astrachan.*			
Early Ripe	Winesap	Green Cheese	Early Harvest.			
Early Harvest	Never Fail	Never Fail	Limber Twig.			
Vandevere	Royal Pearmain	Limber Twig	Oldenburg, Duchess.			
Yellow Bellflower	R. I. Greening	R. I. Greening	Rall's Genet.			
R. I. Greening	Oldenburg, Duchess of.		Wealthy.			
Golden Sweet.						
Maiden Blush.						
Famuese.						

Fayette county, containing, as it does, large areas of coal, together with both rail and water transportation, possesses not only facilities for readily reaching the city markets of both the east and the west, but good local markets as a result of the mining operations. While at present there are few orchards planted for commercial purposes there is a very considerable overplus from the farm orchards which finds a ready market in the mining towns. The county is intersected in an irregular fashion by the Kanawha river, and the portion east of this river is reported as the most favorable for orcharding. The position and contour of the hills in the southern portion of the county have led me to color that part red as indicating possible orchard areas. It will be noted that the list of market fruits contains the long keeping sorts grown in the State, as well as the early summer and fall sorts, indicating that there is a demand for apples from the beginning of the season to its close. Such a demand creates a special and usually a very profitable sort of commercial orcharding, and the fruit growers of Fayette county are to be congratulated on possessing such advantages.

GILMER COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight	Varieties most exempt from scab.	Varieties which suffer most from scab.
Grimes Golden	Ben Davis	Grindstone	Rome Beauty		York Imperial	Romanite.
Glenville Sweet	Rome Beauty	Ben Davis	Ben Davis	Fallawater	Glenville Sweet	Pennock.
Rome Beauty	York Imperial	Rome Beauty	Grimes Golden	Pound Royal	Rome Beauty	Early Harvest.
Benoni	Stark	York Imperial	York Imperial	Baldwin	Pound Sweet	Nickajack.
York Imperial	Grimes Golden	Rall's Genet	Rall's Genet		Grindstone	Never Fail.
Rambo	Winter Winesap	Fallawater	Glenville Sweet		Ben Davis	Yellow Bellflower
Early Harvest	Baldwin	R. I. Greening	Maiden Blush		World's Wonder	
Red Winter Pearmain.	Maiden Blush	Romanite	Grindstone		Mann.	
July Sweet	Black Twig	Winesap	Russet		Early Harvest.	
Winesap	New Town Pippin.	Nickajac .k	Mann		Pawpaw.	
Pawpaw	Nicajack	Russet	Rambo		Maiden Blush.	
Early Golden Sweet	Grindstone	Never Fail	R. I. Greening.			
Fay's Russet	Russet	Winter Pearmain.	Golden Russet.			
Early Strawberry	Golden Russet	Grimes Golden	Never Fail.			
Maiden Blush	R. I. Greening	Green Pippin	Early Strawberry.			
Pound Sweet	Arkansas—Mam		New Town Pippin.			
	Yellow Bellflower.		Pawpaw.			
			Nickajack.			

The apple industry in Gilmer county must at present be confined to the home demand. The county has no railroad or navigable watercourse by which the products of the orchard could be crried to market. The farm orchards are sufficient to supply the local demand, and unless some unusual condition prevails, as during the spring of 1898, the trees bear regularly While no reports on orchard location were received from residents of the county, I am led to suggest the northern portion, colored red on the map, as a likely appie region. This may not prove to be the best apple region of the county when put to actual test, but it is the portion the water-sheds indicates as most likely. The fruit list also suggests that a large and well selected collection of apples are well suited to this region.

GRANT COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having bes form. color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Baldwin.....	York Imperial....	Ben Davis.....	Rall's Genet.....	.....	Vandevere	
Vandevere.....	Ben Davis.....	York Imperial....	Roxbury Russet			
Yellow Transparent	Stark.....	Rome Beauty.....	York Imperial			
Fallawater.....	Baldwin.....	Rall's Genet.....	Smokehouse			
Rambo.....	Spitzenburgh.	Stark.....	Fallawater			
Red June.....	Rall's Genet.....	Mann.....	Spitzenburgh			
Early Harvest.....	Fallawater.....	Walbridge.....	Vandevere			
Northern Spy.....	Wine Sap.....	Edgar Red Streak.	Baldwin.			
Tompkins King....	Northern Spy.....	Baldwin.....	Red Astrachan			
Wagener.....	Red Astrachan....	Wine Sap.				
Wine Sap.....	Yellow Bellflower.	Alexander				
Early Strawberry..	Yellow June.....	Fallawater				
Smokehouse.....	.....	Vandevere				
Yellow Bellflower						

Stock raising is one of the chief pursuits of the residents of Grant county on account of its well turfed hills and valleys and again because of lack of railroad facilities for the great portion of the county. The northern portion of the county is tributary to the main line of the W. Va. Central, but as yet no commercial fruit industry has become established. The county undoubtedly contains areas well adapted to the culture of apples, grapes and peaches, and if shipping facilities become available for these localities some one will certainly discover their suitability for the fruit industry. The fruit list is certainly encouraging, for it contaius all the valuable commercial fruits of the eastern part of the state.

GREENBRIER COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Red June	York Imperial	Grindstone	Yellow Transparent.	Pound Royal	York Imperial.	
Golden Sweet	Ben Davis	Ben Davis	York Imperial	Fallawater	Seek-no-Further.	
Porter	Grimes Golden	York Imperial	Seek-no-Further	Red Astrachan	Wealthy.	
Smokehouse	Baldwin	Rall's Genet	Baldwin	R. I. Greening	Mann.	
Grimes Golden	Yellow Bellflower.	Red Pearmain	Smokehouse	Early Harvest	Yellow Transparent.	
Rambo	Milam	Mann	*Ben Davis.*			
Tompkins King	New Town Pippin.	Winter Pippin	White Pippin.			
Fallawater			Fallawater.			
New Town Pippin			Rambo.			
Seek-no-Further			Pound Royal.			
Rome Beauty.						
Pound Royal.						

Two commercial orchards are reported from the county. In general there is a good supply of fruit grown for home use. The soil and climate of the county of Greenbrier are such that commercial apple growing should be a remunerative industry as soon as sufficient transportation facilities become available. At present such an industry must be confined to regions tributary to the line of the C. & O. R. R., but it often happens, as in the case of Greenbrier county, that much of the best fruit area is too remote to be developed in a commercial way. The map shows two regions in which apples may be grown with profit. In addition to these areas it appears that the northeastern corner of the county possesses an area well adapted for the growth of both apples and peaches. The portion west of the Greenbrier river should be extended to include the territory drained by the headwaters of Muddy creek, north of a line extending from Clintonville through Dawson, and including the area south of the Meadow river and Big Clear creek. In the vicinity of Nuttersville the Nicholas county apple region extends over into Greenbrier somewhat in the fashion indicated by the red on the map. The soil which is best suited to fruit growing in the county is quite well and sharply defined by saying that it lies between the blue grass (limestone) and the sand, and consists chiefly of a red gravel, the result of the breaking down of the underlying shale rock. One would naturally expect to find in this section localities well suited to the cultivation of the New Town or Albemarle Pippin, and I am informed that in the neighborhood of Richlands this most excellent variety is grown with good success.

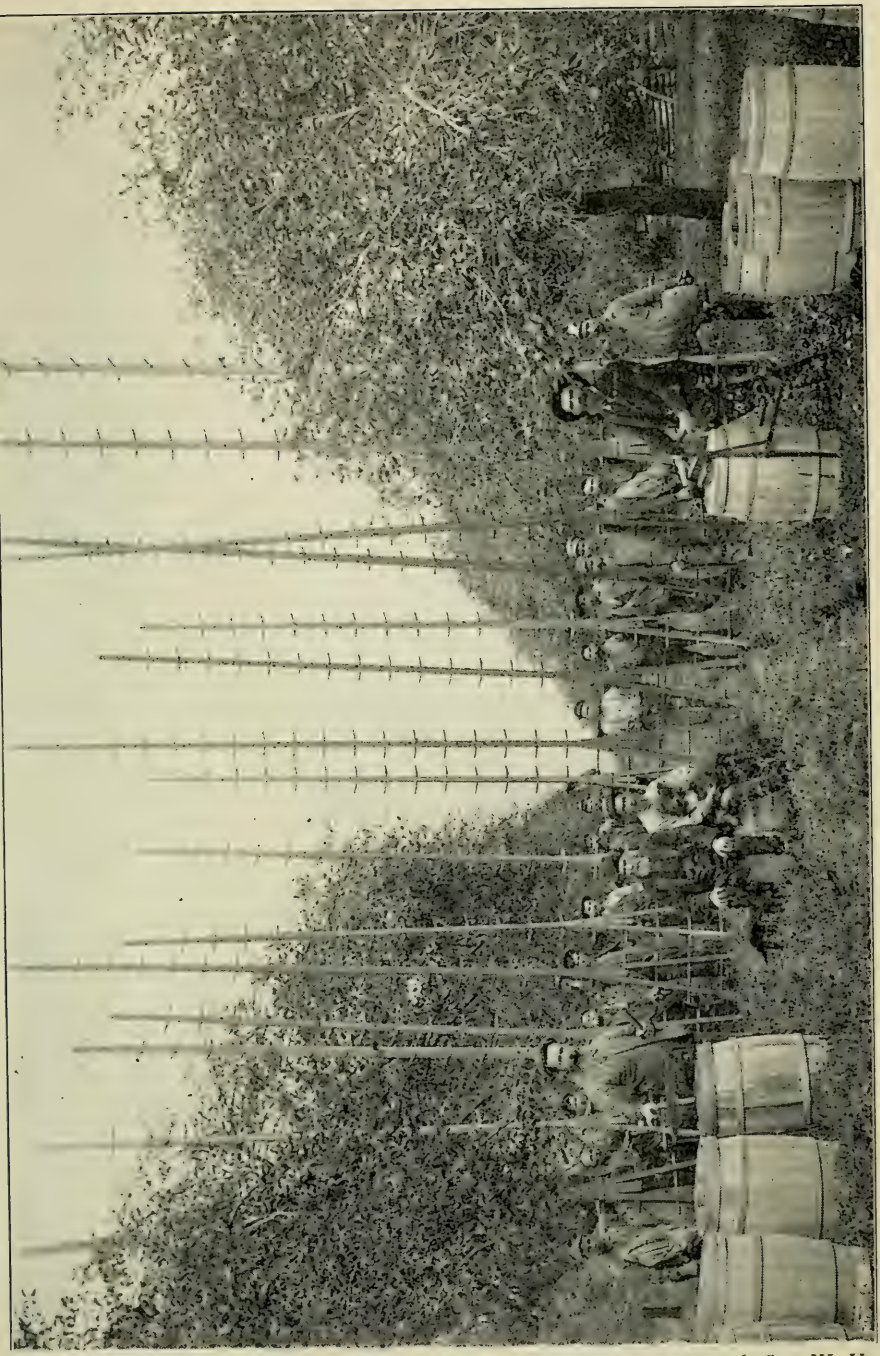

FIG. 10.—A Group of Apple Pickers at Wm. F. and R. Brown's, Hancock Co., W. Va.

HAMPSHIRE COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLGHT RESISTITG.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Winesap	York Imperial	Grindstone.	Ben Davis	Arkansas		Summer Rose.
Maiden Blush	Ben Davis	Ben Davis	Rall's Genet	Bough Sweet		Fall Wine.
Rambo	New Town Pippin	York Imperial	*Fall Orange*	Vandevere		Stark.
Fallawater	Baldwin	New Town Pippin	Smokehouse	Elgin Pippin.		
Early Harvest	Northern Spy	R. I. Greening	*New Town Pippin.*			
York Imperial	Red Astrachan	Northern Spy	Pound Royal.			
Smokehouse	R. I. Greening	Red Astrachan				
Yellow Pippin	Fallawater	Baldwin				
Rall's Genet	Johnson's F. Winter.	Eng. Red Streak.				
	Grindstone	Wine Sap.				
	Russet	Rambo.				
	Rambo	Golden Sweet.				
	Early Transparent.	Fallawater.				
	Maiden Blush	Limber Twig.				
	Pumpkin Sweet.					

Hampshire county being chiefly made up of the valleys of the tributaries of the Potomac and the ridges separating them, presents many localities in which the orchard industry might be expected to gain a ready foot hold and thrive; this is more true of the peach than the apple industry, although there are many family orchards producing apples of high quality. The predominance of the Romney shade, which is so eminently suited to peaches, along the sides of the mountains has fostered the development of this industry in those sections where shipping facilities were afforded. The bearing of transportation upon the success or failure of the fruit industry in any locality is brought out in Hampshire as no where else in our state. The Alleghany Orchard Co. owns about 50,000 peach trees in this county, the product of which must be shipped over a spur of the B. & O. before it reaches the main line. The cost of marketing the product of this orchard in 1897 was some $2,000 more than that for an orchard of over 60,000 trees only about 12 miles distant, the product of which was placed on the main line direct. I am inormed by the owners that this industry is to be abandoned, simply because the cost of transportation over this stub road takes off any margin of profit which the orchard might otherwise pay. Such experiences as this will have a tendency to force our fruit industries to the main lines of R. R. and will discourage possible development in regions remote from main thoroughfares and dependent upon branch roads.

HANCOCK COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTITG.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rambo	Rome Beauty	Ben Davis	Baldwin	Baldwin	Baldwin	Rome Beauty.
Baldwin	Ben Davis	Willow	Rome Beauty	Ben Davis	Willow Twig	New Town Pippin.
Northern Spy	Baldwin	Rome Beauty	Ben Davis	Peck's Pleasant.	Ben Davis	Willow Twig.
Grimes Golden	Willow Twig	Stark	Willow Twig	Fallawater	Rome Beauty	Putnam Russet
Rome Beauty	Grimes Golden	New Town Pippin.	Grimes Golden	Grimes Golden	Vandevere	Red Astrachan.
Early Harvest	Stark	Romanite	Russet	Fall Pippin	Stark	Early Harvest.
Fall Pippin	New Town Pippin.	Winter Pearmain.	Nonsuch	Red Astrachan	Grimes Golden	Smith's Cider.
Red Astrachan	Northern Spy	Yellow Bellflower.	Early Harvest	Northern Spy	Red Canada	Autumn Swaar.
Bough Sweet	Smith's Cider	Russet	Maiden Blush	Early Harvest	Russet	Ben Davis.
Wells	Vandevere	Pennock	Bentley Sweet	Alexander	Mann	Stark.
Maiden Blush	Rambo	R I. Greening	Steele's Red	Wealthy	Red Astrachan	Bentley Sweet.
Swaar	Tompkins King	Baldwin	Rambo	Willow Twig		Winter Parmain
Yellow Transparent.	Bethlemite	Red Pearmain	Yellow Bellflower.	New Town Pippin.		Rambo.
Golden Gate	Winter Pearmain.	Bentley Sweet	Willow	Limber Twig		Golden Gate.
Smith's Cider	Bentley Sweet	Golden Russet	Fall Jenneting	Romanite		
Willow	R. I. Greening		Seek-no-Farther	Pewaukee.		
New Town Pippin.	Red Canada		Romanite	Gray Bellflower.		
Bethlemite			New Town Pippin.			
Stark			Vandevere.			
Stitzenburgh			Rall's Genet.			
Pumpkin Sweet			Golden Sweet.			
Golden Sweet			Red Astrachan.			
[illegible]ey Sweet			Wealthy.			
Jer[illegible]			Tetofsky.			
Russet[illegible]ing			Northern Spy.			
Tompkins [illegible]						
Belmont.						
Gilliflower.						
Red Canada						

Although located at the extreme north end of the Northern Pan-Handle and one of the smallest counties of the State, Hancock has no rival in this or any other State, in the intensity of its apple industry. It does not possess as great an acreage as Berkeley county, yet the area in which orcharding is practiced produces more apples than any area of equal size in the State. The original plantings were almost exclusively confined to the hillsides where the soil is as a rule a sandy clay loam, but of late the industry has crept down and is now fast encroaching upon the sandy terrace of the river bottom. In fact some of the largest orchards are located upon the higher portions of this bottom land. The orchards of this region have been remarkably free from disease up to the present time. The codlin moth has been the chief enemy, but the arsenical sprays have come into general use and its ravages are successfully held in check. The chief particular in which the apple industry of Hancock excells all others in the state, is the complete way in which the growers have prepared themselves to overcome the exigencies of the market. We find here the most complete system of harvesting and storing fruit practiced in eastern U. S. The growers purchase their packages in the plat, employ coopers and set up the barrels on the farm. The fruit is picked so much per barrel, it is inspected, headed and taken at once to the storehouse where it is held either in cold storage chambers or in apple ware rooms until the markets warrent shipment, which is usually during March and April. Such an industry is dependent exclusively upon long keeping sorts. The accompanying Figure 10, reproduced from Bull. 54, of this station, shows a familiar picking scene, and Fig. 12 shows one of the cold storage houses, while Fig. 13 is a recently erected warehouse. While the list of fruit includes a large collection of staple market and table sorts, little attention is given to sorts outside the following: Willow, Ben Davis, Rome Beauty, Bentley Sweet, and Maiden Blush, the last named being the only summer or fall sort receiving special attention. Diseases have made their presence felt in two or three orchards during the last 3 years and the growers must be on the alert for a serious and general outbreak of both the *Apple Scab* and the Bitter Rot, mention of which is made in Bull. 65 of this Station. With care in this matter and more attention to *culture* and *fertilization* this section will undoubtedly maintain the proud position it now holds.

HARDY COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varieties which keep in pits or cellars in fit condition for April market.	Varieties which bear most regularly—underscored bear annually	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rambo.....	York Imperial.....	Grindstone.....	Smokehouse.			
Bellflower.....	Ben Davis.....	Ben Davis.				
Smokehouse.....	Rome Beauty.....	York Imperial.				
Hubbardston.....	Romanite.....	Romanite.				
Romanite.....	Fallawater.....	Rall's Genet.				

Hardy county undoubtedly possesses many of the advantages of soil and climate which have brought wealth and fame to certain counties of the mother State, but because of lack of facilities for reaching the markets of the world the apple industry must remain undeveloped. The whole county is reported as well adapted to apple growing, but a more conservative idea has led me to outline two districts which a topographic and soil survey suggest as best suited to the industry. These areas are colored red on the map.

HARRISON COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellars in fit condition for April market	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rambo	Ben Davis	Ben Davis	Rome Beauty,	New Town Pippin	Ben Davis	Bentley Sweet.
Early Harvest	Rome Beauty	Rome Beauty	Ben Davis	Winesap	Trader's Fancy	Roxbury Russet.
Grimes Golden	York Imperial	Grindstone	Grimes Golden	Munson	Yellow Bellflower	R. I. Greening.
Northern Spy	Baldwin	Romanite	Ralls Genet	Domine	Northern Spy	Waldour.
Rome Beauty	Winesap	Rall's Genet	Early Harvest	Rome Beauty	Fallawater	Limber Twig.
Maiden Blush	Romanite	Winesap	Romanite	Bentley Sweet	Grimes Golden	Rall's Genet.
Winesap	Spitzenburgh	York Imperial	Winesap	Pound Royal	Peck's Pleasant	New Town Pippin.
Pound Royal	Grimes Golden	Spitzenburgh	Spitzenburgh	Early Strawberry	York Imperial	Rome Beauty,
Baldwin	Langford Seedling.	Grimes Golden	Clayton	Red Astrachan	Summer Rose	Rock Remain.
Yellow Bellflower	Stark	Limber Twig	Baldwin	Early Harvest	Yellow Transparent.	Romanite.
Stark	White Pippin	Tompkins King	Roman, Stem	R. I. Greening	R. I. Greening	Yellow Bellflower
Waldour	Northern Spy	Buncome, Red Winter Pearmain.	York Imperial	Roxbury Russet.	English Russet	Pewaukee.
Mayapple Pippin	Maiden Blush	Roxbury Russet	Smokehouse	Pearmain		Hightop Sweet.
Seek-no-Further	Lawver—Delaware	Red Pearmain	Rambo	Bough, Sweet.		
Bough, Sweet	Red Winter	Walbridge, Edgar.	Yellow Transparent.	Fallawater.		
Early Strawberry	Black (Jersey)	Red Streak	Rock Remain	Romanite.		
Smokehouse		Lawver—Delaware	Wagener.			
Yellow Pippin	Grindstone	Red Winter	Northern Spy.			
Vandevere	Jonathan	Rock Remain	Vandevere.			
Red Astrachan	New Town Pippin	Pennock	R. I. Greening.			
Bentley	Tompkins King	Vandevere	Seek-no-Further.			
Black (Jersey)	Roxbury Russet	Baldwin	Lake.			
Winter Wine	Winter Rambo	Winter Rambo	Langford Seedling			
Fall Rambo	Maryland Beauty	Seek-no-Further	Maiden Blush.			
Mt. Lookout Sweet.	Trader's Fancy	Stark	Johnson's Fine Winter			
Arkansas—Mam'th Black Twig.	Wagener	Arkansas—Mam'h Black Twig.	Limber Twig.			

I. Greening.....	Yellow Bellflower..	Willow Twig	Fall Rambo.			
Fall Wine.....	Arkansas—Mam'h Black Twig.	Trader's Fancy....	Smith's Cider.			
Golden Sweet.....	Early Harvest.....	Peck's Pleasant....	Nansemond.			
Oldenburg, Duchess of.	Smith's Cider.....	Maiden Blush	Bough, Sweet.			
White Pearmain...	Fallawater	New Town Pippin.	Roxbury Russet.			
Peck's Pleasant....	Bentley Sweet.....	Mann.....	Pennock.			
Limber Twig.....	.....	Smith's Cider.				
Pennock.						

According to the map, Harrison county possesset east of the West Fork river a region well suited to apple culture, but as would appear from the red area on the map the greater part of the county may be looked upon as a likely apple region. This is emphasized because the county is intersected in both directions by railroads having their junction at Clarksburg. By these roads the county is afforded exceptional advantages for transportation. This together with the very excellent and extended list of varieties reported would suggest remarkable future possibilities for this county in the way of fruit growing. Another advantage, possessed by only a few counties of the State, is a good home nursery. Home grown trees are always to be preferred to imported ones, and the Southern nursery at Clarksburg can and should form a nucleus for a large fruit industry in the county.

JACKSON COUNTY.

TABLE FRUITS.	MARKET FRUITS	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market.	Varieties which bear most regularly. Underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Early Harvest	Rome Beauty	Ben Davis	*Rome Beauty*	Lady Sweet	Early Harvest	Cathead.
Rambo	Ben Davis	Rome Beauty	*Ben Davis*	Red Detroit	Rome Beauty	Leather Coat.
Grimes Golden	Smith's Cider	Grindstone	Early Harvest	Sheep Noses	Ben Davis	Rome Beauty.
Rome Beauty	Northern Spy	Winesap	Rambo	Rambo	Limber Twig.	
Maiden Blush	Stark	Stark	*Golden Sweet*	Fall Jenneting	Wealthy.	
Golden Sweet	Grimes Golden	Red Romanite	Smith's Cider	Early Strawb'ry.	Pound Royal.	
Red June	York Imperial	Northern Spy	Maiden Blush	Roman Beauty	Early Harvest.	
Moore's Extra	Maiden Blush	Grimes Golden	Gavenstein	Romanite	Rambo.	
Rambo, Winter	Winter Pearmaine	Smith's Cider	*Yellow Transparent*	Twenty - Ounce Pippin.	Grimes Golden.	
Detroit Bl'k	Nickajack	World Wonder	*Winesap*	Northern Spy	Golden Sweet.	
Jonathan	Winesap	Nickajack	Baldwin	R. I. Greening	Benoni.	
Fallawater	Vandevere	Trader's Fancy	Fallawater	Never Fail.		
Fall Wine	Baldwin	Winter Pearmaine	Red Romanite	Fall Willon.		
Trader's Fancy	Gano	Indian	Red Vandevere	Willow Twig.		
Early Adams	Wealthy	Gano	Bentley Sweet	Cooper.		
Pumpkin Sweet	White Pippin	Baldwin	Fall Pippin	Golden Russet.		
Early Strawberry	Early Harvest	English Russet	Pumpkin Sweet	Fallawater.		
White Pippin	Rambo	Bently Sweet	*Rock Remain*	Buncome Red Winter.		
Cooher Early W'te.	Cooper	Winter Chandler	Grimes Golden	Pearmaine.		
August Sweet	Winter Chander	Walbridge	Willow Twig	Nickajack.		
Bough Sweet	Fallawater	Sawyer Red Pippin.	Fall Jenneting.			
Fall Pippin	Green Pippin	Rock Remain	Stark.			
Pound Sweet	Mann Apple	Fall Jenneting	Golden Pippin.			
Smith's Cider	Winter Rambo	Winter Russet.	Northern Spy.			
Northern Spy	Improved Grindstone.	Willow Twig	Mann Apple			
R. I. Greening	Red Astrachan	Green Pippin	Log Cabin.			
Limber Twig	Winter Strawberry	Flat Graft	Gray Pearmaine.			
Yellow Bellflower	Blue Pearmaine	Log Cabin	Winter Strawberry			
Green Pippin	English Russet	Mann Apple	Early Ripe.			

Winesap	Never Fail	Winter Rambo	Shockley			
Seek-no-Further	Golden Russet	Carlough	Emperor of Russia			
Fall Jenneting	Lawver	Limber Twig	White Pippin.			
Waldour		Romanite	Yellow Bellflower.			
Pound Royal		Winter Strawberry	Romanite.			
Bentley Sweet		Bough Sweet	Fall Willow.			
Early Ripe		Never Fail	Yellow Russian.			
Lowell		Golden Russet	Winter Rambo.			
New Town Pippin		Ralls Genet	Golden Russet.			
Mann Apple			Never Fail.			
Summer Sweet			Grindstone.			
Baldwin.						
Fall Willow.						
English Rambo.						
Golden Russet.						
Early Sweet.						
Winter Rombo.						
Golden Pippin						

A very active interest in orcharding is manifested in Jackson county in general, This is limited to the home orchard, but there are also a number of commercial plantations. The county possesses a conriderable frontage along the Ohio river, which always makes the hills bordering the bottom lands well adapted to apple growing. Th areas marked with the black cross-hatching are those especially mentioned as suitable to orcharding. In addition to the red and black lining, I think it safe to say that a belt parallel to the Ohio and off the bottom lands will be shown to be well suited to the cultivation of the Rome Beauty and Ben Davis. The large list of varieties reported is proof of the interest in this branch of fruit growing. This, together with good railroads and waterways, make a very extensive commercial fruit development possible.

JEFFERSON COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Belmont	Ben Davis	Grindstone	*Ben Davis*	Willow Twig	Ben Davis	Willow Twig.
Rambo	York Imperial	Ben Davis	*York Imperial*	New Town Pippin.	Stark	New Town Pippin.
New Town Pippin.	New Town Pippin.	New Town Pippin.	*Winesap*	Belmont	Bentley Sweet	Rome Beauty.
Baldwin	Stark	York Imperial	*Grimes Golden*	Lawver—Delaware Red Winter	Northern Spy	Winesap.
Maiden Blush	Winesap	Rome Beauty	Willow Twig	Smith's Cider	York Imperial	Lawver—Delaware Red Winter
Grimes Golden	Willow Twig	Willow Twig	Bentley Sweet	Winesap	Wealthy	
Fallawater	Rome Beauty	Stark	Maiden Blush	Rome Beauty	York Stripe.	
Rome Beauty	Bentley Sweet	Bentley Sweet	Ralls Genet	Rambo.	Maiden Blush.	
Domine	Gravenstein	Winesap	Rome Beauty	Yellow Bellflower.		
Sweet Winter Paradise.	York Stripe	Ralls Genet	Early Harvest			
Early Strawberry	Limber Twig	Russet	New Town Pippin.			
Ben Davis	Twenty-Ounce	Limber Twig	Red Astrachan.			
Mammoth		Pippin	*York Stripe.*			
English Rambo		Roxbury Russet	*Summer Queen.*			
Winesap		Fallawater	*Limber Twig.*			
Limber Twig			Baldwin.			
Early Harvest			Northern Spy.			
Yellow Transparent.			Spitzenburgh.			
Benoni			Smokehouse.			
Red Astrachan			Pound Royal.			
Smokehouse			Rambo.			
Peck's Pleasant			Summer Pearmain			

Jefferson county possesses soils so well suited to wheat growing and to general agriculture that the fruit business has been somewhat tardy in its development as compared with that of Berkeley. During the last three years, and particularly during the year of 1899, the planting of apple orchards has become quite a fad in the county, and the acreage, in consequence, has been greatly increased. The narrow belt of country bordering the State of Maryland and east of the Shenandoah river is remarkable for the fruit prospects which it

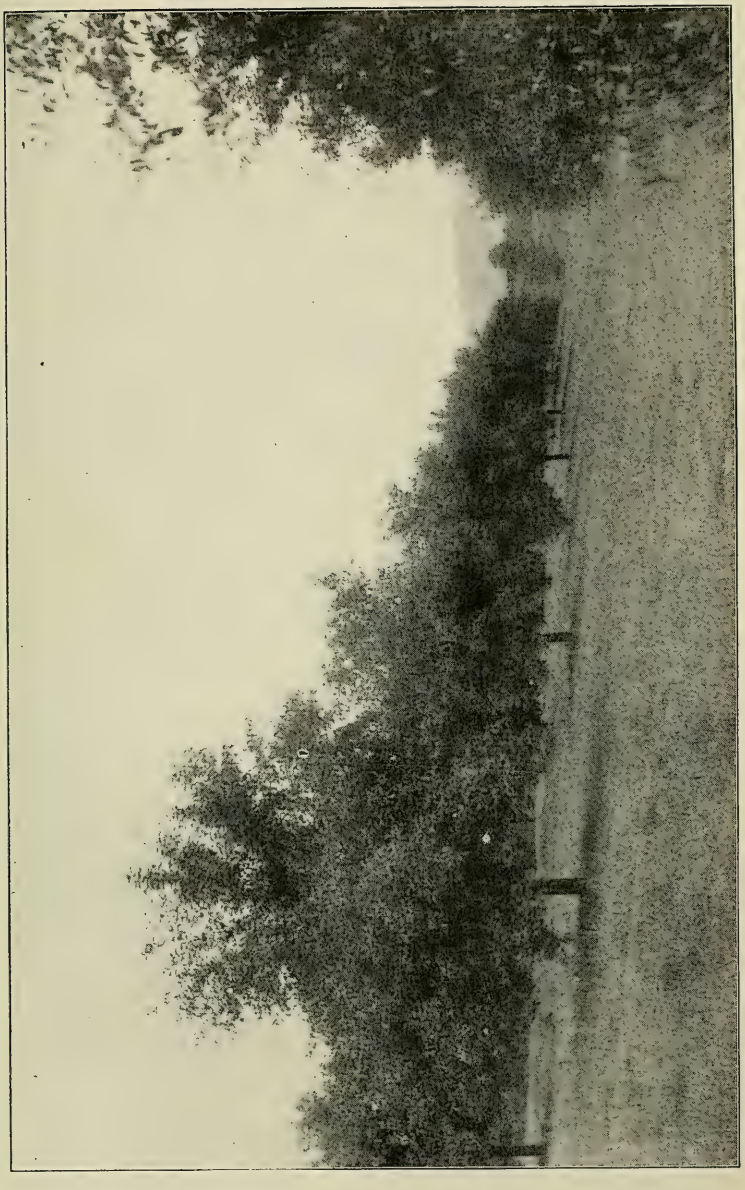

FIG. 11—WILLOW ORCHARD.

the western portion of the county shares the good fortune of Berkeley in having a narrow belt of the shale of the famous "Apple-Pie Ridge" in direction paralell to the county line from where the Opequan creek becomes a part of the county line in a southerly direction to near the Virginia boundary. The main body of the county is a rich limestone, but apples thrive well upon it, and there are now a number of very profitable commercial apple and peach orchards distributed through the county. Besides the Norfolk & Western, the Baltimore & Ohio has two lines passing across the county, so the very best of R. R. transportation is offered. The fruit list here presented gives a large selection of choice dessert fruits, together with the standard market sorts for the eastern division of the State. There is a local nursery at Middleway, owned by Fry & Chinneworth, and another at Kearneysville owned by Dr. D. W. Border.

KANAWHA COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varieties which keep in pits or cellars in fit condition for April market.	Varieties which bear most regularly—underscored bear annually	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rambo	Rome Beauty	Ben Davis	*Rome Beauty*	Rome Beauty	Roxbury Russet.	Winesap.
Smith's Cider	Ben Davis	Rome Beauty	*Ben Davis*	Ben Davis	Maiden Blush	Rambo.
Yellow Transparent.	York Imperial	Rall's Genet	Winesap	R. I. Greening	Baldwin	Milam.
Rome Beauty	Rall's Genet	York Imperial or Johnson's F. Winter.	*Missouri Pippin*	Wagener	Prior's Red—Big Hill.	Ralls Genet.
Ben Davis	Grimes Golden	Virginia Greening.	*Wilson*	Wilson	Gravenstein	Sweet Russet.
Early Harvest	Hill's Seedling	Wilson's Seedling.	Smith's Cider	Bailey Sweet	Swaar	R. I. Greening.
Fall Orange	Smith's Cider	Hill's Seedling	Hill's Seedling	Bough, Sweet	Pound Royal	Rome Beauty.
Tompkins King	Buckingham	English Russet	Yellow Transparent.	Pumpkin Sweet.	Summer Vandevere.	
Horse	Tompkins King	Winesap	Pearmain	Sweet Russet	Yellow Transparent.	
Maiden Blush	Summer Queen	Grindstone	Stark	Rambo	Buckingham.	
Twenty-Ounce	Maiden Blush	Maiden Blush	Shockley	Ralls Genet	Rome Beauty.	
Summer Queen	Winesap	Grimes Golden	Maiden Blush	Red Baldwin	Yellow Bellflower.	
Grimes Golden	White Pippin	Romanite	Early Strawberry.	Winesap.		
Baldwin	Early Strawberry	Roxbury Russet	Red June.			
Winesap	Roxbury Russet	Tompkins King	Roxbury Russet.			
Northern Spy	Shockley	Shockley	Northern Spy.			
Smokehouse	Baldwin	York Imperial	Rambo.			
Nodhead	Tulpehocken	Baldwin	Winter Vandevere			

KANAWHA COUNTY.—Continued.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight	Varieties most exempt from scab.	Varieties which suffer most from scab.
Wagener	Big Hill	Big Hill	*Pound Royal.*			
Fallawater	Wagener	Wilson	*Ralls Genet.*			
Golden Sweet	Wilson	Winter Vandevere	*Russian Crab.*			
Pound Royal	Grindstone	White Pippin	Grindstone.			
Winter Vandevere.	Jonathan	Jonathan	Grimes Golden			

The natural facilities for transportation afforded by the Kanawha River, together with good freight service on 3 lines of R. R., together with the capital city of the State and a large population engaged in mining, should make Kanawha county the producer of large quantities of all classes of horticultural products. The area of the county north and east of the Kanawha river, divided into two sections by the Elk river should prove successful apple growing sections. At present, however, not as much attention is given to this industry as the markets or the areas suited to it will permit. The fruits suited to the region are of high grade, both from a dessert and market standpoint.

LEWIS COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rambo	Rome Beauty	Grindstone	Maiden Blush	Fallawater	Yellow Pippin	Russet.
Early Harvest	Ben Davis	Ben Davis	Baldwin	Pound Royal	Peck's Pleasant.	Milam Red.
Winesap	York Imperial	Rome Beauty	Ben Davis	Rall's Genet	Milam.	
July Sweet	York Imperial, or Johnson's Fine Winter.	York Imperial, or Johnson's Fine Winter.	*Rome Beauty*	White Pippin	Nickajack.	
Rome Beauty	Grimes Golden	Rall's Genet	R. I. Greening		Pound Pippin.	
Ba'dwin	Winter Rambo	Limber Twig	Fall Rambo		Yellow Transparent.	
Bough, Sweet	Roxbury Russet	Romanite	Smokehouse		York Imperial.	
Northern Spy	Pennock	Winter Pippin	Rambo		Rome Beauty.	
Fallawater	Spitzenburgh	Baldwin	Northern Spy		Northern Spy.	
Yellow Bellflower	Golden Russet	Northern Spy	York Imperial or *Johnson's Fine Winter.*			
Golden Sweet	Yellow Bellflower	Grimes Golden	*Never Fail.*			
R. I. Greening	Northern Spy	N. W. Greening	*Rall's Genet.*			
Ben Davis	Winesap	Winter Rambo	Early Harvest.			
Maiden Blush	Fall Wine	Milam	Roxbury Russet.			
Black Apple	Fallawater	Roxbury Russet	Winesap.			
Ralls Genet	Maiden Blush	Green Winter Pippin.	Yellow Transparent.			
Nickajack	Grindstone	Never Fail	Golden Russet,			
Milam	Milam	Arkansas Mam'th Black Twig.	Golden Sweet.			
Waldour	Transcendent	Smokehouse	Pound Royal.			
Yellow Transparent.	R. I. Greening	Golden Russet	Bradford's Best.			
Red June	Tompkins King	Belmont	Walbridge.			
York Imperial	Nansemond	Oldenburg, Duchess of.	Pewaukee.			
Roxbury Russet	Never Fail	Russet.	Romanite.			

LEWIS COUNTY.—Continued.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Grimes Golden.....	Pound Royal.....	Nickajack.	Nickajack.			
Winter Russet.....	Oldenburg, Duchess of.	Smith's Cider.				
Summer Queen....	Russet.....					
	Yellow Transparent.					
	Romanite.					
	Nickajack.					
	Smith's Cider.					
	Walbridge.					

Apple growing in Lewis county is as a rule confined to the farm orchard. The product is sufficient to supply the home and the local market. There are no commercial orchards reported. The railroads of the county should tend to encourage this industry, as outlet to the western as well as the seaboard cities is thus afforded The map also indicates that the northern part of the county should share the growth of this business with Harrison county. The list of varieties reported from Lewis is one of the largest and most varied received from any county, indicating that orchards now planted contain a large collection of the best sorts, and that the question of sorts need no longer deter one from planting commercial orchards.

LINCOLN COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market.	Varieties which bear most regularly. Underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rome Beauty.....	Rome Beauty.....	Rome Beauty.....	Rome Beauty.			
Winter Russet.....	Ben Davis.....	Ben Davis.....	Tompkins King.			
Yellow Bellflower..	Russet.....	Tompkins King...	Sops of Wine.			
	Tompkins King...	Sops of Wine.....	Grimes Golden.			
	Sops of Wine.....	....	Ben Davis.			

Although possessing large areas suited to the production of apples, the commercial industry is precluded because of lack of transportation facilities. About Hamlin several persons are giving considerable attention to the fruit problems of the county, and when the time comes that means of reaching the markets are afforded the county in general will be benefitted by the experience of those who are now working against such odds. The fruit list reported is meager, but contains both of the standard market sorts for this quarter of the State, *i. e.*, Rome Beauty and Ben Davis.

LOGAN COUNTY.

TABLE FRUITS.	MARKET FRUTS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Tompkins King....	Ben Davis.....	Ben Davis.....	*Ben Davis*.....	Tompkins King.	Ben Davis.	
Grimes Golden.....	Rome Beauty	Rome Beauty.....	*Early Harvest*.....	Rome Beauty.		
Pearmain.....	York Imperial....	Ralls Genet.....	Rock Apple.			
Maiden Blush.....	Ralls Genet.....	Lansingburg.....	Striped June.			
French.....	Winesap.....	.....	Smith's Cider.			
	Lansingburg.....	.....	Rome Beauty.			
	Buckingham.....	.....	Yellow Transparent.			
	Red Astrachan....	.....	Ralls Genet.			
			Johnson's Fine Winter.			

While all sorts of fruits and vegetables are reported as doing well in this county, commercial horticulture is out of the question, as the county has no railroad or water way by which such products could be placed in the market. The map would indicate that apples were well adapted to certain localities which may be found to be much larger than represented by this preliminary survey. The fruit list, while not large, includes an excellent selection.

McDOWELL COUNTY.

TABLE FRUITS.	MARKET FRUITS,	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rambo	Rome Beauty	Rome Beauty	*Rome Beauty.*			
Rome Beauty	Ben Davis	New Town Pippin.	Rambo.			
Red June	York Imperial	Ben Davis	*Ben Davis.*			
Early Harvest	New Town Pippin.	York Imperial	Nickajack.			
Pound Royal	Nicajack	Shockley	Early Harvest.			
Winesap	Winter Queen	Winesap	*Robertson's White.*			
Seek-no-Further	Winesap	Robertson's White	*Winesap.*			
Baldwin	Limber Twig		*Baldwin.*			
Crow Egg	Robertson's White		*Robertson's.*			
Milam	R. I. Greening		*Pound Royal.*			
	Winter Greening		*Creek.*			
	Shockley		R. I. Greening.			
	Early Harvest		Winter Queen.			

Little or no attention is given to fruit growing in the county, although the reports received indicate that at least 25 per cent. of the area of the county is suited to apple growing. The black cross hatching represents the area reported, while the red suggests the area as indicated by natural features. The apple list proves that our best commercial varieties thrive well in the locality.

MARION COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from blight.	Varieties which suffer most from scab.
Smith's Cider	Rome Beauty	Ben Davis	Maiden Blush	Pound Royal	Romanite	Bentley Sweet.
Northern Spy	Ben Davis	York Imperial	*Rome Beauty*	Rock Remain	Grindstone	Winter Pippin.
Maiden Blush	York Imperial	Rome Beauty	R. I. Greening	R. I. Greening	Rome Beauty.	
Pound Royal	Stark	Green New Town	*Ben Davis*	Rambo	Spice Apple.	
May Apple Pippin.	Baldwin	Vandevere	Baldwin	August Sweet	Northern Spy.	
Rome Beauty	Smith's Cider	Smith's Cider	Winesap	Winesap	Fallawater.	
Baldwin	Northern Spy	Grindstone	Yellow Sweet	Early Harvest	Golden Sweet.	
Waldour	R. I. Greening	Romanite	Fall Rambo	Baldwin	York Imperial.	
Golden Pippin	Pennock	Limber Twig	Winter Rambo	Gravenstein.		
Early Harvest	Red Romanite	Spitzenburgh	*Rambo*	Tompkins King.		
Early Strawberry	Grindstone	Russet	Loudon Co. Sweet	Vandevere.		
Loudon Co. Sweet	Golden Russet	Loudon Co. Sweet.	Northern Spy	Black Jersey.		
Rambo	Winter Rambo	Bentley	Green New Town	Rome Beauty.		
Bough Sweet	Romanite	American Pippin	Benoni	Gloria Mundi.		
Benoni	Loudon Co. Sweet.	Willow Twig	Romanite	Bentley Sweet.		
Grimes Golden	Pound Royal	Yellow Bellflower.	Willow Twig	Northern Spy.		
Golden Sweet	Grimes Golden		Fall Orange	Limber Twig.		
Gilliflower	Fall Wine		Late Strawberry.			
Late Strawberry	Winesap.					
Winesap	Pewaukee.					
Vandevere	Tompkins King.					

Apples are grown to a considerable extent and find a ready sale in the local markets. Few, if any, are grown for export. In fact, many more high grade fruits would be consumed in the local markets were they grown. The soil and exposure of several portions of the county are well suited to the production of the apple. The county is also well provided with railroad facilities. A more extended industry along this line will undoubtedly be built up to meet the demands of the growing towns and villages. The variety list reported is extended and contains many superior cooking and eating sorts, as well as the standard market varieties.

MARSHALL COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rambo	Ben Davis	Ben Davis	Baldwin	Bentley Sweet	Rome Beauty	Red June
Roman Stem	Rome Beauty	Rome Beauty	Russet	Rambo	Baldwin	Rambo
Pound Royal	Baldwin	Willow Twig	Rambo	Winter Greening	Sheepnose	Lawver—Delaware Red Winter
June Sweeting	Pearmain	*Bentley Sweet	Roman Stem	Smokehouse	Roman Stem	Willow Twig.
Winesap	Russet	Black Apple	Early Harvest	Red June	Ben Davis	Ralls Genet.
English Rambo	Bent ey Sweet	Grindstone	Winesap	Pearmain	Tompkins King.	Northern Spy.
Early Harvest	Roxbury Russet	Stark	Golden Sweet	Pound Royal	Grimes Golden	Romanite.
Grimes Golden	Grindstone	Spitzenburgh	Early Strawberry.	Bough, Sweet	Spitzenburgh	YellowBellflower
Baldwin	Rambo	Russet	Ben Davis	Red Russet	Northern Spy	
Northern Spy	Winter Rambo	R. I. Greening	Northern Spy	Pennock.		
Green Newtown	Vandevere	*Romanite	Maiden Blush	Yellow Bellflow'r		
Rome Beauty	Early Harvest	Golden Russet	Tompkins King			
Spitzenburgh	Maiden Blush	Pearmain	Yellow Bellflower			
Maiden Blush	Northern Spy	Winter Winesap	Bentley Sweet.			
Pumpkin Sweet	Winesap	English Rambo.				
Golden Sweet	Gilliflower	Northern Spy.				
	Golden Russet					
	Roman Stem					*Same.

One of the four counties comprising that remarkable section of West Virginia known popularly as the Northern Panhandle, it shares with the other counties comprising this region a soil and climate well suited to the growth and maturity of the apple. While there are no large commercial apple orchards, the aggregate product of the county is large and the orchard area is pretty generally distributed over the county, as is shown by the reports as platted on the map. The variety list includes a good selection of market sorts, and the transportation facilities offered by the B & O., the Ohio River R. R. and the Ohio river should tend to increase the production of this fruit.

MASON COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellars in fit condition for April market	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rome Beauty	Rome Beauty	Ben Davis	*Rome Beauty*	Rome Beauty	Rome Beauty	Ben Davis.
Early Harvest	Ben Davis	Rome Beauty	Ralls Genet	Prior's Red	Baldwin	Shockley
Yellow Bellflower	Smith's Cider	Romanite	*Ben Davis*	Maiden Blush	Stark	Sops of Wine.
Smith's Cider	Baldwin	Baldwin	Shockley	Smith's Cider	Ben Davis	Grimes Golden.
Summer Pippin	Grimes Golden	Grindstone	Sops of Wine	Romanite	Grimes Golden	Smith's Cider.
Grimes Golden	Stark	Stark	*Smith's Cider*	Milam	Yellow Transparent.	Rambo.
Winesap	Maiden Blush	Rall's Genet	Kentucky	Russet	Early Harvest	Golden Sweet.
Maiden Blush	Golden Russet	Winesap	Northern Spy	Ben Davis	Duchess of Oldenburg	Rome Beauty.
Pound Royal	Sops of Wine	Seek-no-Further	Grimes Golden	Bailey's Sweet	Wealthy	Baldwin.
Paradise Sweet	Winesap	Rock Remain	*Baldwin*	Golden Sweet	R. I. Greening.	
Ohio Nonpareil	Nansemond.	Grimes Golden	Seek-no-Further		Rall's Genet.	
Baldwin	Arkansas	Smith's Cider	Rall's Genet.		Pound Royal.	
Northern Spy	Northern Spy	Russet	Romanite—Red		Roxbury Russet.	
Golden Sweet	New Town Pippin.	Cooper	Rambo		Northern Spy.	
Seek-no-Further	Roxbury Russet	White Bellflower	Early Harvest.			
New Town Pippin	Tompkins King		Maiden Blush.			
Rambo	Russet		Tompkins King.			
Romanite	Early Harvest		Tulpehocken.			
Roxbury Russet	Red Astrachan		Limber Twig.			
Strawberry			R. I. Greening.			
Yellow Transparent.			Golden Sweet.			
Russet			Fallawater.			
Hurlburt			Williams' Favorite			
Ben Davis			Early Strawberry.			
R. I. Greening.						

Mason county presents another example of the results of the stimulus of good transportation facilities upon the fruit industry. Several commercial orchards are reported. The soil and exposure in certain portions of the county are well suited to the industry and high lands back from Point Pleasant present natural features which should make peach growing a profitable industry. It is

possible that the areas represented as best suited for apple culture on this preliminary map may be wide of the true state of affairs, but it is the best that can be presented from the information at hand. The large list of varieties indicates that apple culture has received considerable attention, and that it was very universal throughout the county.

MERCER COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rambo	Ben Davis	Ben Davis	*Grindstone*	Walker's Red	Fallawater	Summer Pearmain.
Queen	York Imperial	York Imperial	*Apple Butter Ap'le*	Mann	Maiden Blush	Sops of Wine
Pearmain	Rome Beauty	Rome Beauty	*Winesap*	Horse	Grimes Golden	Rome Beauty.
Northern Spy	Improved Pearmain.	Pearmain	*Northern Spy*	Grimes Golden	Ben Davis	Limber Twig.
Rome Beauty	Ralls Genet	Grindstone	*Favorite*	Pound Royal	Yellow Transparent.	Grimes Golden.
Grimes Golden	Queen	Grimes Golden	*Ben Davis*			Winesap.
Red Astrachan	Rambo	Northern Spy	Rall's Genet			Early Ripe.
Yellow Transparent.	Northern Spy.	Winesap	Rome Beauty			Cheese, Green.
Maiden Blush	Fallawater	Stark	Buckingham.			
York Imperial	Smith's Cider	Rall's Genet	Red Astrachan			
	Buckhingham	Sops of Wine	R. I. Greening.			
	R. I. Greening	Rambo	Pearmain.			
	Limber Twig	English Russet	English Russet.			
			Never Fail.			
			York Pippin.			
			Pound Royal.			

A goodly quantity of apples is grown in the county, yet the commercial production of the fruit is not engaged in. About 80,000 bushels is reported as an average crop, yet few, if any, find their way out of the county. The eastern part of the county is reported as a successful apple producing section. The Norfolk and Western railroad affords means of transportation, and in sections not too remote commercial apple culture should prove profitable. The list of varieties is good, both from the commercial and culinary point.

MINERAL COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Northern Spy	Ben Davis	Ben Davis	Grimes Golden	Early Harvest	Northern Spy	Early Harvest.
Rambo	Rome Beauty	York Imperial	Tompkins King	Northern Spy	R. I. Greening	Vandevere.
Sweet Paradise	York Imperial	Vandevere	Twenty Ounce	Astrachan	Chenango	Winter Rambo.
Early Strawberry	Baldwin	Roxbury Russet	Red Astrachan	Twenty Ounce	Roxbury Russet.	Red June.
Winesap	Northern Spy	Baldwin	Ben Davis	Ben Davis	Red Vandevere	Grimes Golden.
Summer Queen	Grimes Golden	Limber Twig	Limber Twig	Maiden Blush	York Imperial	Baldwin.
Maiden Blush	English Rambo	Fallawater	Golden Sweet	Roxbury Russet.	Yellow Transparent.	Winesap.
Yellow Transparent.	Yellow Bellflower.	Grimes Golden	Northern Spy	Smith's Cider	Summer Queen.	
Oldenburg, Duchess of.	Birmingham B'uty	Winesap	Cooper	Rome Beauty	Tetofski.	
Early Harvest	King	Cooper	York Imperial.			
Chenango	Winesap	Cannon Pearmain.	Vandevere.			
Mother	Oldenburg, Duchess.	Winter Wagener	Early Harvest.			
Grimes Golden	Summer Astrach'n	New Town Pippin.	Rambo.			
Winter Wagener	Mother	Spitzenburgh	White Pippin.			
York Imperial	Fallawater	Green Pippin	Winesap.			
Yellow Bellflower	Smokehouse	Rambo	Fallawater.			
Vandevere	Buncome, Red Winter Pearmain.	Black Apple	Tetofski.			
Golden Sweet	Vandevere		*Leather-Coat.*			
Smokehouse	Rambo		*Summer Queen.*			
August Sweet	Green Pippin		*Pumpkin Sweet.*			
Fallawater	Twenty Ounce		Maiden Blush.			
			Johnson's F. Winter.			
			Green Pippin.			
			Red June.			

The fertile valleys of Patterson's creek and other tributaries of the Potomac have held the attention of the people generally upon grazing and general agriculture. The fine shale soil belonging to the Romney shale formation spreads itself out along the mountain

sides from end to end of this county. The keen-eyed promoters of the peach business in this region of the State have been awake to the possibilities here offered, and now have extensive plantations in this county. Besides the interests of the Alleghany Fruit Company, there are a number of private enterprises, but most attention is given to the peach. In this county we find one of the few localities of the State where "sweet cherries" may be expected to prove a commercial success. The apple list of the county includes all the standard sorts of the region, both for dessert and commercial purposes, yet the county cannot be said to be a commercial apple region.

MINGO COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPER.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from blight.	Varieties which suffer most from scab.
Yellow Transparent	Ben Davis	Ben Davis	*Ben Davis*	World's Wonder	Wayne Co. Seedling	Buckingham
Smith's Cider	Rome Beauty	York Imperial	*Limber Twig*	Red Astrachan	Ben Davis	Kentucky Red Streak
Maiden Blush	York Imperial	Rome Beauty	Nickajack	Oldenburg, Duchess of	Limber Twig	
Red June	Winesap	Arkansas	Northern Spy	Early Strawbe'y	Nickajack	
Rome Beauty	Arkansas—Mam'h Black Twig.	Winesap	Wayne Co. Seedl'g	Kentucky Red Streak	Northern Spy	
Ben Davis	Daddy Apple	Daddy Apple	*Rome Beauty*		Daddy Apple	
Early Harvest	Red Astrachan	Wayne Co. Seedl'g	Fallawater		Rome Beauty	
Rambo	Limber Twig	Limber Twig	Shockley		Winesap	
White June	Nickajack	Northern Spy	*Winesap*		Early Harvest	
Early Ripe	Northern Spy	Shockley	*Pound Royal*			
	Shockley	Arkansas—Mam'th Black Twig.	*Golden Russet*			
			Early Harvest			

Mingo county does not produce apples commercially, although the shipping facilities offered by the Norfolk & Western, together with good local markets, should build up such an industry. The map indicates that areas well suited for commercial apple culture are to be found in the northeastern as well as the southern part of the county. The apple list also indicates the good selection of commercial and culinary sorts which the county is capable of producing.

MONONGALIA COUNTY.

TABLE FRUITS.	MARKET FRUITS,	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Washington Wine.	Ben Davis	Ben Davis	Spitzenburgh	.....	.....	Rall's Genet.
Rambo	York Imperial	York Imperial	Washington Wine.			
Ben Davis	Rome Beauty	Grindstone	Grindstone.			
Baldwin	Baldwin	Rall's Genet	Russet.			
Golden Sweet	Northern Spy	Spitzenburgh	York Imperial			
Waldour	Washington Wine	Washington Wine.	Pennock.			
Black Jersey	English Rambo	Limber Twig	English Rambo.			
Early Harvest	Waldour	Russet	Winter Wine.			
Maiden Blush	R. I. Greening	Romanite	Limber Twig.			
Red Astrachan	.....	Pennock	Maiden Blush.			
Limber Twig	.....	Winter Wine	Baldwin.			
Harvest Sweet	.....	Simpson	Northern Spy.			
Yellow Bellflower	.....	Waldour.				

The elevated lands lying between the Cheat and Monongahela rivers are well suited to the growth of fruits,—the heavier soils to apples and the sandy lands to peaches. North and west of the Monongahela river, where the soil is of a limestone nature, we find the territory best suited to the growth of the apple. The standard market fruits all grow well here, but annual crops are by no means the rule. In even the best territories the biennial crop is not a certainty. In the neighborhood of the Experiment Station the orchards carried a heavy crop in 1895, and again in 1899, with very few apples during during any intermediate season. The high land orchards on strong lands have done better than this, and bore a crop in 1897. While there is territory enough suited to the industry to encourage a large commercial development were it within convenient range for shipment, the long haul necessary to deliver the fruit at a shipping point will long hinder the development of this resource.

MONROE COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand	Sorts having best form, color and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Northern Spy	Ben Davis	Ben Davis	York Imperial	Yellow Transent.	York Imperial	Early Harvest.
Tompkins King	Rome Beauty	York Imperial	Ben Davis	York Imperial	Rome Beauty	Rome Beauty.
Fall Rambo	York Imperial	Roxbury Russet	Roxbury Russet	Fallawater	Rall's Genet	Pound Royal.
Roxbury Russet	Northern Spy	Rall's Genet	Winter Pearmain		Pearmain	Never Fail.
York Imperial, or Johnson's Fine Winter	Winesap	Grindstone	Early Joe		Ben Davis	Golden Russet or Bullock's Pippin
Early Joe	Roxbury Russet	R. I. Greening	Jefferis		Yellow Bellflower	Winesap.
Chenango	R. I. Greening	Northern Spy	R. I. Greening		Northern Spy	Pearmain.
Jefferis	Arkansas—Mam'h Black Twig.	Shockley	Wealthy		Winesap	R. I. Greening.
Grimes Golden,	Gano	Arkansas—Mam'h Black Twig.	Rall's Genet		Golden Sweet	Big Hill.
Westfield Seek-no-Further.	Smith's Cider	Willow Twig	Rome Beauty.			
Famuese, or Snow.	Nickajack	Rome Beauty	Winesap.			
Yellow Bellflower	Shockley	Winesap	Summer Rose.			
Pearmain	Paragon	Gano	Wagener.			
Golden Russet	Baldwin	Paragon	Johnson's Fine Winter.			
Yellow Transparent.	New Town Pippin.	Golden Russet	Never Fail.			
Maiden Blush	Grimes Golden	Winter Pearmain	Rambo.			
Rambo	Rall's Genet	Vandevere	Baldwin.			
Fallawater	World's Wonder	Limber Twig	Yellow Transparent.			
Smokehouse		Roman Stem	Grimes Golden.			
Baldwin		English Russet	Smokehouse.			
Golden Sweet			Yellow Bellflower.			
Early Harvest			Northern Spy.			
R. I. Greening			Early Harvest.			
Rome Beauty			N. Y. Pippin.			
Pound Royal			Lady Finger			

MONROE COUNTY—Continued.

TABLE FRUITS.	MARKET FRUITS	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varieties which keep in pits or cellars in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Fall Winesap. N. Y. Pippin.						

No commercial apple industry exists in this county, yet the home product is about equal to the demand. The greater part of the county is reported as favorable to apple culture, as is indicated by the map. There is considerable interest manifest in the culture and test of varieties by several parties in the county. This is notable in the case of Mr. G. S. Scott, Sink's Grove, who is testing a large variety collection. The results of this work should prove of immense value to the whole of that portion of the State located in the mountain region south of Randolph county. The large list of varieties already shown to be of merit in the county is sufficient to justify one in planting extensively, but the tests now in progress may add varieties even more valuable to the section than any of those included in the accompanying list.

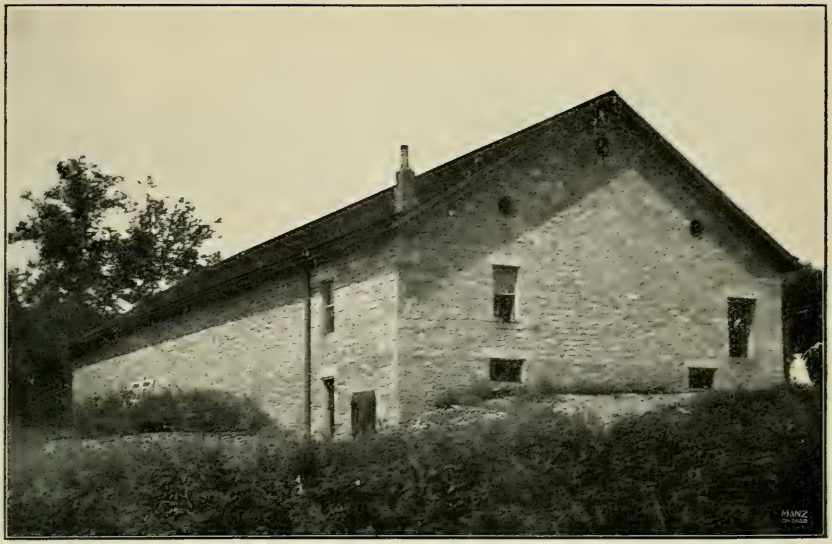

FIG. 12.—Cold Storage House of Wm. F. and Robt. Brown, Hancock, Co., W. Va. Capacity 10,000 Barrels.

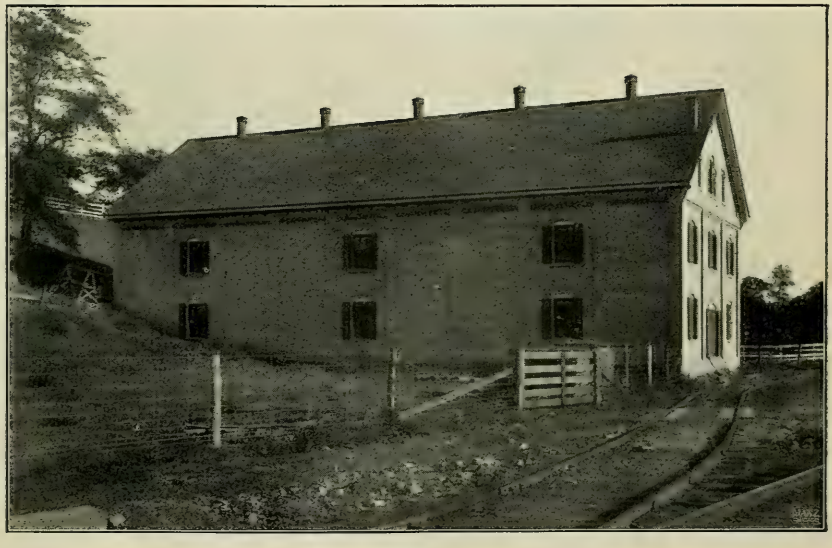

FIG. 13.—A Recently Erected Warehouse in Hancock Co., W. Va.

MORGAN COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Pumpkin Sweet	Ben Davis	Ben Davis	Green Pippin	Winter Sweet	Ben Davis	Green Pippin.
Yellow June	York Imperial	York Imperial	Willow Twig	Rambo	York Imperial	Bellflower.
Red Streak	Jonathan	Rall's Genet	Ben Davis	Nonsuch	Northern Spy	Nonsuch.
Johnson's Fine Winter.	Grimes Golden	Baldwin	Black (Jersey)	Hyslop	Green Pippin	Rambo.
Sweet Paradise	Baldwin	Grindstone	Johnson's Fine Winter.	Alexander	Wolf River	Eng. Red Streak.
Summer Queen	Green Pippin	Green Pippin	*Summer Queen*	Twenty Ounce	Grimes Golden	Alexander.
Rambo	Vandevere	Willow Twig	*Fallawater*	Pound Royal	Tetofski.	New Town Pip'n.
Fallawater	Sweet Paradise	Sweet Paradise	Limber Twig	Sweet Paradise	Red Astrachan	Summer Queen.
Maiden Blush.	Cooper	Jonathan	York Imperial	York Imperial		Rall's Genet.
Baldwin	Pilot	Winesap	Roman Knight or Carthouse.	Ben Davis.		
Early Harvest	Winesap	New Town Pippin.	Winesap.	Maiden Blush.		
Long Stem	Fallawater	Northern Spy	Yellow Transparent.			
Oldenburg, Duchess of.	Alexander	Fallawater	Early Harvest.			
Golden Ball			Grimes Golden.			
Smokehouse			Alexander.			
Golden Sweet			Hyslop.			
			Smokehouse.			
			Rambo.			
			Sweet Paradise.			
			Maiden Blush.			
			Golden Russet.			
			Northern Spy.			

Morgan, like Hardy, county undoubtedly possesses areas well suited to the perfection of high quality apples. In general, however, the trees will be of only moderate growth, and the fruit, while well colored, will be medium to small in size. With heavy dressing of phosphoric acid and nitrogen this would undoubtedly be corrected, but with the present lack of transportation facilities for those portions of the county where apples might be expected to do best the industry will be slow in attaining a commercial character.

NICHOLAS COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from blight.	Varieties which suffer most from scab.
Golden Sweet.....	Rome Beauty	Ben Davis	Rome Beauty.....	Red June.....	.....	Winter Sweet.
Rome Beauty.....	Ben Davis	Rome Beauty	Ben Davis	Milan Vert.....	.....	Ben Davis.
Maiden Blush.....	Rall's Genet.....	Grindstone	Golden Sweet.....	Ben Davis	.....	Nickajack.
Twenty Ounce.....	Vandevere.....	Vandevere.....	Golden Russet.....	Nickajack.....		
Yellow Bellflower..	Baldwin	Baldwin	Winter Sweet.....	Alexander.		
Jefferis	Early Harvest.....	Milan Vert	Vandevere	Transcendent.		
Vandevere.....	Red June.....	Nickajack	Early Harvest.....	Baldwin.		
White Pippin.....	Nickajack.....	Winter Sweet.				
Yellow Transparent	Grindstone	English Russet.				
Pumpkin Sweet....	Winesap.....					
Fall Pippin.....	Fall Pippin.....					
	Yellow Transparent.					
	English Russet.					

The position and contour of Nicholas county would seem to favor the cultivation of fruits and the apple in particular. This has been suggested by the correspondent in mapping the county. The present fruit development is limited to supplying local demand, as there are no navigable streams or railroads within the county which would foster a commercial industry. The variety list shows a good selection for market as well as dessert purposes.

OHIO COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Fall Pippin	Rome Beauty	Rome Beauty	Ben Davis	Waldour	Fall Pippin	Rome Beauty.
Hubbardston	Baldwin	Ben Davis	Golden Sweet	Bough, Sweet	Swect Bough	Never Fail.
Grimes Golden	Ben Davis	Willow	English Rambo	Gilliflower	Northern Spy	NewTown Pip'in
Bough, Sweet	Bentley Sweet	Romanite	Rome Beauty	Findley Queen	Baldwin	Rambo.
Yellow Transpar'nt	York Imperial	New Town Pippin.	Grimes Golden	Autumn Swaar.	Yellow Bellflow'r	
Black Gilliflower	Grimes Golden	Pearmaine	English Strawb'ry	Fallawater	Maiden Blush.	
Rambo	Hubbardston	Bentley Sweet	Bough, Sweet	Rome Beauty	Rambo.	
Baldwin	Fall Pippin	Roxbury Russet	Fallawater	Fall Pippin	Bentley Sweet.	
Smith's Cider	Sweet Bough	Winter Pearmain.	Maiden Blush	Roxbury Russet.	Ben Davis.	
Early Harvest	Northern Spy	Grimes Golden	Sweet Russet	R. I. Greening	Famuese.	
Sweet Swaar.	Yellow Bellflower.	Russet	Bentley Sweet		Pumpkin Sweet.	
Golden Sweet	Russet	Grindstone	Roxbury Russet		Russet.	
Peck's Pleasant	Waldour	Baldwin	Early Harvest.			
English Rambo	Pennock	Waldour	Rambo.			
Farris Sweet, or R. I. Seek-no-Furth'r	English Rambo	R. I. Greening	Pound Sweet.			
Roman Stem	R. I. Greening	Cunningham Sw't.	R. I. Greening.			
Maiden Blush	Pound Sweet		Pearmain.			
Famuese	Tompkins King.					
Roxbury Russet.						
Red Astrachan.						
Strawberry.						
Northern Spy.						
Vane.						
Gilliflower.						

This county undoubtedly provides the best local market in the State. With this stimulus commercial horticulture has grown to be an important industry. Market gardening, as well as the growing of small and orchard fruits, affords a remunerative industry for many people in the county. Commercial apple culture is not carried on as it is in Hancock county, yet there are several important orchards in the county. The sections best suited for this industry are indicated by the map, and the fruit list indicates the range or choice which the grower has.

PENDLETON COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Newtown Pippin..	Ben Davis.....	Grindstone	York Imperial....	Rall's Genet.....	Grindstone.....	Spitzenburgh
Grimes Golden.....	York Imperial.....	York Imperial....	Fallawater	Spitzenburgh....	Pound Royal....	Newtown Pippin
Pound Royal.....	Baldwin	Rall's Genet.....	Smokehouse	Rambo	Fallawater.....	Rambo.
Smokehouse.....	Ralls Genet.....	Arkansas.....	Ben Davis.....	R. I. Greening...	Russet.....	Wine.
Maiden Blush.....	Nansemond.	Winesap	Winesap.	Wine	.....	English Red St'k
Fallawater	Fallawater.....	Baldwin	Rall's Genet			
Baldwin.	Pound Royal.....	Roxbury Russet..	Red Astrachan			
Early Joe..... ...	.....	Lady Finger.....	Early Harvest.			
Clark Pearmain....	.....	.....	Summer Pippin.			
Rambo.						
Early Harvest..						
Red Astrachan.						
Johnson's F. Wint'r						

As the fruit list suggests, and as the map indicates, Pendleton county possesses a soil and climate suited to the production of New Town Pippins, but New Town Pippins 40 miles from a railroad could not be made a profitable crop, although they might be of the highest quality. Here then is the explanation for the present status of apple growing in the county.

PLEASANTS COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from blight.	Varieties which suffer most from scab.
Pound Royal	Rome Beauty	Grindstone	*Pound Royal*	Ben Davis	Romanite	Romanite.
Maiden Blush	Ben Davis	Ben Davis	*Red Astrachan*	Russet	Maiden Blush	Rome Beauty.
Rambo	Grimes Golden	Rome Beauty	*Rome Beauty*	Rome Beauty	Pound Royal	Rambo.
Baldwin	Romanite	Romanite	*Grimes Golden*	Pound Royal	Prior's Red	Early Harvest.
Black Gilliflower	Willow Twig	Green Pippin	*Rambo*	Northern Spy	Yellow Transparent.	Pearmain.
Chandler	Grindstone	Peck's Pleasant	Benoni	Gilliflower	Rambo	Northern Spy.
Early Harvest	Peck's Pleasant	Lawyer	Wine	Fallawater	Roman Knight	Baldwin.
Northern Spy	Baldwin	Northern Spy	Romanite	Green Cheese	Ben Davis	Honey Sweet.
Grimes Golden	Lawyer	Fink	Roxbury Russet	Pumpkin Sweet.	Russet	English Russet.
Benoni	Maiden Blush	Limber Twig	Ben Davis	Cooper	Rome Beauty.	
Yellow Bellflower	Winesap	Arkansas	Northern Spy	August Tart	Bellflower.	
Golden Sweet	Moore's Extra		Chandler	Fall Rambo	Limber Twig.	
Green Cheese	Yellow Bellflower.		Fallawater	Maiden Blush	Grimes Golden.	
Seek-no-Further	Russet		Maiden Blush	Twenty Ounce.		
Fall Wine	Roxbury Russet		Limber Twig	Winesap.		
Winesap	Prior's Red		Early Harvest	Pound Royal.		
	Twenty Ounce.					
	Pound Royal.					
	Rambo.					
	Stark.					

Pleasants county shares with the other Ohio river valley counties the fruit industry, which seems to be the result of a favorable location and transportation facilities. A considerable quantity of high grade fruit is now produced, and much more might be. The hill orchards, as a rule, produce fruits of high color and good keeping qualities. The county is somewhat cut up by small streams, which outline the areas best suited to apples, as shown on the map. The varieties are characteristic of the upper Ohio River valley, and are well known and well received in the leading markets of the United States.

POCAHONTAS COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varieties which keep in pits or cellars in fit condition for April market.	Varieties which bear most regularly—underscored bear annually	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rambo	Ben Davis	Ben Davis	*Northern Spy*		Smokehouse	Winter Winesap.
Tompkins King	York Imperial	York Imperial	*York Imperial*		Rambo	Rustycoats.
Golden Russet	Stark	Rall's Genet	*Smokehouse*		Fallawater.	
Northern Spy	Rall's Genet	Golden Russet	*Ben Davis.*		Roxbury Russet.	
Stark	Spitzenburgh	Romanite	*Rambo*		York Imperial.	
Smokehouse	Fallawater	Winesap	*Fallawater*		Milam.	
Maiden Blush	Sweet Paradise	Grindstone	Pound Royal		Maiden Blush.	
Winesap	Pennock	Stark	Winesap		Gravenstein.	
Bellflower	Waldour	Mann	Rall's Genet.			
Fallawater	Milam	Fallawater	Early Harvest.			
Pound Royal	Pound Royal	R. I. Greening	Ramsdell's Sweet.			
Bough, Sweet	Golden Russet	Tompkins King.				
Summer Queen	Green New Town Pippin.	Spitzenburgh.				
Rall's Genet.						
Grimes Golden.						

The map indicates that considerable areas of this county are suited to apple culture. The tributaries of the Greenbrier, Gauley and Elk rivers cut the county into three regions. In general the fruit region is above the blue grass in a gravelly belt which extends along the sides of the mountains and tops of the hills. At present the growing of fruit is entirely limited to that for home use, yet the soil and climate would indicate that there are areas well suited to peaches and apples which with adequate transportation might become important fruit growing centers.

PRESTON COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPER.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from blight.	Varieties which suffer most from scab.
Fall Wine	Baldwin	Ben Davis	Transcendent	Sweet Russet	Tompkins King.	Sour Bough.
Smokehouse	Ben Davis	York Imperial	*Spitzenburg*	Fallawater	Roxbury Russet.	Early Harvest.
Gilliflower	Rome Beauty	Rome Beauty	Ben Davis	Lady Blush	Smokehouse	Baltzby Sweet.
Baldwin	York Imperial	Baldwin	Baldwin	Pound Royal	Willow Twig	Maiden Blush.
Fallawater	Grimes Golden	Bentley Sweet	Waldour	Rambo	Golden Russet	Northern Spy.
Northern Spy	Fallawater	Nonsuch	Rall's Genet	Smokehouse	Lawver, Delaware Red Winter.	
Rall's Genet	Nonsuch	Rall's Genet	Lady Blush	R. I. Greening	Fallawater.	
Yellow Bellflower	Tompkins King	Roxbury Russet	Fallawater.			
Porter	Northern Spy	Grindstone	Northern Spy.			
Rambo	R. I. Greening	Winter Rambo	Tompkins King,			
Ben Davis	Rambo	Willow Twig	York Imperial.			
Sour Bough	Belmont	Smith's Cider	Porter.			
Red Astrachan	Yellow Transparent.	Romanite	Rambo.			
Pearmain	Oldenburg, Duchess of	Fameuse	*Smokehouse.*			
Sops of Wine	Lady Blush	Waldour	Oldenburg, Duchess of			
Grimes Golden	Yellow Bellflower	Grimes Golden	Sops of Wine.			
Rome Beauty	Bentley Sweet	Fallawater	Rome Beauty.			
Sweet Russet	Smokehouse	Lawver, Delaware Red Winter	Smith's Cider.			
Early Strawberry	Roxbury Russet	Spitzenburg	Fameuse.			
Early Tart	Rosy Genet	Northern Spy	Roxbury Russet.			
Pound Royal	Maiden Blush	Smokehouse	*Early Strawberry.*			
Early Harvest	Lawver—Delaware Red Winter.	Red Vandevere	*Early Harvest.*			
Yellow Transparent.	Spitzenburgh.		*Black Gilliflower.*			
Guseman Sweet	Winesap		Grimes Golden.			
Bough, Sweet	Green Cheese		Beauty of Kent.			

PRESTON COUNTY.—Continued.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market.	Varieties which bear most regularly. Underscored bear annually.	Sorts which suffer most from blight	Varieties most exempt from scab.	Varieties which suffer most from scab.
Seek-no-Further ...	Red Vandevere ... Jonathan..... Prior's Red..... Pound Royal	....	Sweet Russet. Bough Sweet. Maiden Blush.			

Preston county does not grow apples in a commercial way, yet nearly every farm is provided with an orchard which furnishes the home supply and some for market. The best orchards are found upon the ridges, which as a rule are chiefly composed of broken down shale and sand rock. The fruits are of good quality and color, although usually medium in size. Trees are long lived, although during recent years the Scab and Brown Spot have both appeared in the orchards. The county posseses considerable areas well adapted for fruit culture, and as the M. & K. R. R. is in operation transportation facilities will be afforded not only for orchard products, but as well for cabbage, onions and celery, which can be grown to a high degree of perfection in the alluvial soils of the Glades.

PUTNAM COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rome Beauty	Ben Davis	Ben Davis	*Yellow Transparent*	Yellow Transparent.	Gano	Golden Drop.
Rambo	Rome Beauty	Rome Beauty	Grimes Golden	Golden Drop	Arkansas	Rome Beauty.
Golden Sweet	Grimes Golden	Grindstone	*Ben Davis*	Rome Beauty	Wealthy	Rambo.
Baldwin	Romanite	Romanite	*Golden Sweet*	Limber Twig	Ben Davis	Romanite.
Grimes Golden	Spitzenburgh	Roxbury Russet	*Maiden Blush*	Grimes Golden	Rome Beauty	Jennetings.
Yellow Transparent.	Baldwin	Arkansas Mam'h Black Twig.	*Gano*	Red Astrachan	Yellow Bellflower.	
Pound Royal	R. I. Greening	Gano	Rall's Genet	Blue Pearmain	Winesap.	
Cooper	Winesap	Golden Russet	Smith's Cider	Ben Davis	Limber Twig.	
Early Chandler	Arkansas Mam'h Black Twig.	Jenneting	*Rome Beauty*	Early Harvest	Red Astrachan.	
Red Astrachan	Gano	Crawford's Keeper	Iron Apple		Pound Royal.	
Tulpehocken	Red Astrachan	Shockley	Orange		Baldwin.	
Early Harvest	Buncome—Red Pearmain.	Peck's Pleasant	*Early Harvest*		Yellow Transparent.	
Maiden Blush	Wealthy	Milam	Nickajack.			
English Russet	Crawford's Keeper	Hill's Favorite	Oldenburg, Duchess of.			
Yellow Bellflower	Roxbury Russet	Winesap	*Willow Twig.*			
White June Eating.	Willow Twig	Russet	*Jenneting.*			
Ben Davis	Golden Russet		Bough, Sweet.			
Northern Spy	Shockley		Baldwin.			
Hubbardston	Peck's Pleasant		*Winesap.*			
Roxbury Russet	Fallawater		Tetofski.			
Fameuse	Mann		Shockley.			
Wealthy	English Russet		Wealthy.			
			Fall Rambo.			

Putnam county, like the counties bordering on the Ohio river, possesses large areas of land well suited to fruit culture on both banks of the Kanawha river. This river is improved, and carries a line of boats which afford satisfactory water communication for all points along the Ohio and lower Mississippi rivers. In addition the most likely fruit districts are also crossed by two lines of railroad, which

might by a little judicious encouragement of the fruit business increase their own earnings through this section, and bring thousands of dollars to the owners of farms along their lines. The successful orchards, both of apples and peaches, now standing upon suitable sites are sufficient to demonstrate that the fruit business in this section is not a hazardous undertaking. Then, too, the fruit list, as well as the fruit map, justifies the statement that great opportunities here await the intelligent cultivator.

RALEIGH COUNTY.

TABLE FRUITS.	MARKET FRUITS	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varieties which keep in pits or cellars in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rome Beauty.....	Rome Beauty.....	Ben Davis	*Rome Beauty*.....	Rome Beauty ...	Yellow Bellflower	Ben Davis.
Winesap.....	Ben Davis.....	Rome Beauty	Ben Davis	Winesap.	Baldwin	Buckingham.
Pearmain.....	Benoni.....	Red Pearmain.....	Shockley	Milam	Maiden Blush...	Pearmaine.
Yellow Transparent.	Shockley	Shockley.....	Early Harvest.....	.....	Fallawater.....	Rome Beauty.
Early Harvest.....	Tompkins King...	Bellflower.....	Maiden Blush.....	.....	Ben Davis	Winesap.
Yellow Bellflower .	Yellow Transparent.	.....	Baldwin.....	.....	Yellow Transparent.	Milam.
Baldwin	Limber Twig	.....	Red Astrachan....	.....	Tompkins King.	Early Harvest.
Maiden Blush.....	.....	.....	Smith's Cider.			
Sweet Russet.....	.....	.....	Golden Russet.			
Northern Spy.						
Smith's Cider.						
Rambo.						

Reports indicate that the eastern portion of the county is suited for apple culture, but in addition the general elevation and contour of the county would suggest that a considerably larger area, as indicated by the red on the map, may prove suitable to the culture of the fruit. Transportation facilities, which are only afforded to the eastern portion of the county, will undoubtedly keep the commercial feature confined to that part of the county. At present the product is only about equal to the home demand. The variety list offers a considerable range for selection among dessert fruits, but the market sorts are in reality confined to Ben Davis and Rome Beauty.

RANDOLPH COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rome Beauty	Ben Davis	Ben Davis	Early Harvest	Early Harvest	Grindstone	Black Apple.
Rambo	Northern Spy	Rome Beauty	Romanite	Fallawater	Fallawater	Belmont.
Early Harvest	York Imperial	York Imperial	Waldour	Ben Davis	Early Harvest	Summer Pearmain.
Fallawater	Baldwin	Roxbury Russet	Rambo	Rambo	Black, Jersey	Twenty-Ounce.
Grimes Golden	Grimes Golden	Grindstone	Russet	Tompkins King.		White Pippin.
Ohio Beauty	Romanite	Romanite	Fallawater	Johnson's Fine Winter.		White June.
Smokehouse	Grindstone	Russet	Black Jersey	Baldwin		Rome Beauty.
Maiden Blush	Russet	Talman's Sweet	Ben Davis	Northern Spy.		
Black Apple	Waldour	Limber Twig	Rome Beauty	Romanite.		
Fall Wine	Fallawater	Tompkins King	Tompkins King.			
Red June	Rome Beauty	Rock Pippin	Yellow Transparent.			
Russet	Limber Twig	Northern Spy	Wealthy.			
Northern Spy	Spitzenburg	Spitzenburgh	Limber Twig.			
Yellow Transparent.	Winesap	Fallawater	Spitzenburgh.			
Winesap	Golden Pippin	Arkansas	Golden Pippin.			
Limber Twig	New Town Pippin.	Winesap	Arkansas.			
Red Astrachan	Rambo	Rusty-Coat Milam.	Northern Spy.			
Oldenburg, Duchess of.	Mann	Gano	Sops of Wine.			
Chenango Strawberry.	Winter Wine	New Town Pippin.	Winesap.			
Golden Pippin			July Sweet.			
Wine Apple			Rusty-Coat Milam.			
Twenty-Ounce			Yellow Bellflower.			
			Oldenburg, Duchess of.			

By soil and location Randolph is naturally a grazing county. At present, however, only about one-half of her territory has been reclaimed, the other portion remaining in natural forest, which in turn yields employment to many, and brings a large revenue. The

land already in the hands of the tillers of the soil has amply proven its fitness for the production of certain choice market and dessert fruits. Experience here, as elsewhere, has proven the elevated plateaus and hill-tops to be the most satisfactory location for regular bearing apple orchards. If the hills slope off to a valley carrying a stream of considerable size, such as the Tygarts Valley river, so much the better. If possible select elevated land with a northeast exposure. Buds start later in the spring, and are, consequently, less liable to injury from late frosts, a trouble which seems to be one of the greatest draw-backs to peach culture in the county. With the development of the coal in the western part of the county and the increased demand for all horticultural products which is certain to follow a good local market for a considerable quantity of fruit is assured.

RITCHIE COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Winesap	Rome Beauty	Ben Davis	*Cooper*	Rome Beauty	Cooper	Rome Beauty.
Porter	Ben Davis	Rome Beuaty	Ben Davis	Pound Royal		Ben Davis.
Rome Beauty	Grimes Golden	Grindstone	Winesap	Northern Spy.		
Russet	York Imperial	York Imperial	*Rome Beauty.*			
Ward	Maiden Blush	Rall's Genet.	Yellow Transparent.			
Maiden Blush	Cooper	Jonathan	Maiden Blush.			
Cooper	Roxbury Russet	Cooper	Rambo.			
Sweet June	Fall Wine	Winesap	Early Harvest.			
Northern Spy	Winesap	Baldwin	Romanite.			
Fall Wine	Vandevere	Vandevere	Rall's Genet.			
Vandevere	Tulpehocken	Russet	Pennock.			
Rambo	Rambo	Willow Twig	Grimes Golden.			
Grimes Golden	Northern Spy	Northern Spy	York Imperial			
Roxbury Russet		Pearmain	Summer Queen.			
Pound Royal			Spice, Sweet.			
Winter Wine.						
Yellow Bellflower.						

While Ritchie county makes no pretense of producing apples in a commercial way, the county, nevertheless, has a considerable area over which soil conditions and exposure are favorable to apple culture, as is suggested by the areas reported on the map. In addition to the reported area I have ventured to suggest the area marked red as a likely apple district. As is shown by the little map, page 96, this county is included in that territory covered by the frost of 1898. This was undoubledly the exception, and while it should be held in mind, it should not discourage planting to meet the increasing local demand.

ROANE COUNTY.

TABLE FRUITS.	MARKET FRUITS,	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Yellow Transparent.	Rome Beauty	Ben Davis	*Rome Beauty*	Willow Twig	Rambo	Willow Twig.
Rome Beauty	Ben Davis	Rome Beauty	*Ben Davis*	YellowBellflow'r	Rome Beauty	YellowBellflow'r
Early Harvest	York Imperial	Grindstone	Early Harvest	Fallawater	Ben Davis	Grimes Golden.
Pumpkin Sweet	Vandevere	York Imperial	*Vandevere*		Belmont	Sweet Russet.
Winesap	Romanite	Rall's Genet	*Rambo*		Winesap.	
Rambo	Baldwin	Nickajack	Willow Twig		Russet.	
Early Strawberry	Belmont	Fallawater	Strawberry		Yellow Vandevere.	
Golden Sweet	Pearmain	Robertson's Pearmain.	Stark		Limber Twig.	
Maiden Blush	Winesap	Romanite	*Maiden Blush.*			
Grimes Golden,	Stark	Willow Twig	Northern Spy.			
Summer Sweet	Northern Spy	Seek-no-Further	*Russet.*			
Summer Pearmain.	Rall's Genet	Red Astrachan	*Grimes Golden.*			
Northern Spy	Grindstone	Stark	*Bentley Sweet.*			
Bough, Sweet	Big Hill	Baldwin	Winesap.			
Baldwin	Shockley	Northern Spy	*Golden Sweet.*			
Vandevere	Roxbury Russet	Lawver	Summer Pearm'n.			
Ralls Genet	Willow Twig	Rambo	Romanite.			
Ben Davis	Rambo	Pennock	Grindstone.			
Nonsuch	Russet	Roxbury Russet	Sheep Nose.			
Big Hill		Pound Royal	Pound Royal.			
Yellow Bellflower		Winesap	*Wagener.*			
Pound Royal		Tompkins King	*Summer Bellflower.*			
Willow Twig		Arkansas Mam'th Black Twig.	*Never Fail.*			
Smokehouse.						

A glance at the map shows at once that Roane county contains a large area of surface suited to the profitable production of the apple. The reports, as well as a study of elevations and exposures, tell the same tale. The one handicap to the development of this industry to its fullest extent is lack of shipping facilities. The apple area is too far from the Ohio river to justify an attempt to haul such a bulky commodity for shipment by boat, even at the reduced rates offered. The only railroad at present entering the county is a branch from

Spencer to Ravenswood, on the main line of the Ohio River railroad. This taps the northern end of the apple section, and should tempt the owners of suitable land to plant orchards. The appended list of varieties carries all the standard dessert and market sorts, and with the increasing demand for good fruit there is no reason why, with good care and proper selection of sorts, commercial orchards should not prove a paying venture for the residents of the northern portion of the county.

SUMMERS COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Maiden Blush	Ben Davis	Ben Davis	Stark	Pearmain	Sops of Wine	Pearmain.
Rome Beauty	Rome Beauty	Rome Beauty	Swaar	Maiden Blush	Red Astrachan	Winesap.
Pound Royal	York Imperial	Ralls Genet	Twenty Ounce	Pound Royal	Rall's Genet	Smokehouse.
Red June	Rall's Genet	Roxbury Russet	Wealthy	Twenty Ounce	Early Ripe	Bough, Sweet.
Stump	Red Canada	York Imperial	*Rall's Genet.*	R. I. Greening	Early Strawbe'y	Buckham.
Golden Sweet	Shockley	Bailey's Sweet	Early Ripe		Nansemond	Rall's Genet.
Early Harvest	New Town Pippin	Limber Twig	Nansemond		Green Pippin	Rome Beauty.
Early Ripe	Pound Royal	Pearmain	Early Harvest		Rome Beauty	Yellow Bellflow'r
Yellow Transparent.	Limber Twig	Nansemond	Pound Royal		Fallawater	Red June.
Fallawater	Crow Egg	Buncome—Red Winter Pearmain	*Rome Beauty*		Ben Davis	Limber Twig.
Bough, Sweet	Yellow Transparent.	Iron Apple	*Ben Davis*		Red June.	
Gravenstein	Red June	Wolf River	Red June		Crow Egg.	
Paradise, Sweet	Yellow Bellflower.	Shockley	Tetofski		Summer Pearmain.	
Sops of Wine	Winesap	Winesap	Pearmain		Winter Pearm'n.	
Yellow Bellflower	Pearmain		*Fallawater*		Yellow Bellflow'r	
Winesap	Smokehouse		Paradise, Sweet		Baldwin.	
New Town Pippin	Red Astrachan		Yellow Bellflower.		Rambo.	
Rambo	Johnson's Fine Winter.		Baldwin		Maiden Blush.	
Ben Davis	Northern Spy		*Winesap*		Smokehouse.	
Northern Spy.	Russet		*Johnson's Fine Winter.*		Winesap	
Pumpkin Sweet	Rambo		*Buckingham*		Early Harvest.	
Baldwin			*Rambo*		Northern Spy.	

About one-half of this county is reported as suited for the production of apples. A contour study allows of even a greater venture; including quite three-fourths of the area of the county, as indicated by the red cross-hatching on the map. The large area in the county suited to the industry, together with the long lists of dessert and market fruits, should in itself be a sufficient guarantee for the succcess of the industry in the county. In 1898 this county produced 50,000 barrels of choice fruit. With an industry so well established, and with the transportation offred by the C. & O. R. R., commercial orchards should rapidly develop in regions accessible to the shipping points.

TAYLOR COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Bough, Sweet	Ben Davis	Ben Davis	Maiden Blush.	Early Harvest	McIntosh, Red	Early Harvest.
Limber Twig	Rome Beauty	Rome Beauty	Fall Rambo	Golden Sweet	Limber Twig	Winter Russet.
Rambo	Baldwin	Grindstone	Rome Beauty	Pound Royal	Grindstone	Wealthy.
R. I. Greening	York Imperial	York Imperial	Romanite	Tompkins King	Rambo	YellowBellflow'r
Fallawater	Grimes Golden	Romanite	Limber Twig	Winter Russet	Ben Davis	Grimes Golden.
Nansemond	Waldour	Red Romanite	Northern Spy	R. I. Greening	Fameuse	Pound Royal.
Pound Royal	Roxbury Russet	Pound Royal	McIntosh,Red	Rome Beauty	EarlyStrawberry	Rome Beauty.
Northern Spy	Northern Spy	Limber Twig	Red Astrachan	Fallawater	York Imperial	Winter Rambo.
Early Harvest	Fallawater	Fall Jenneting	Pennock	Bough, Sweet	Pennock	Fallawater.
Rome Beauty	Winter Rambo	Fall Rambo	Fall Jenneting	Pearmain		Bentley.
Grimes Golden	Fall Jenneting	Roxbury Russet	York Imperial	Pennock		Red Romanite.
Smokehouse	Yellow Bellflower.	Red Spitzenburg	Bough, Sweet	Orange		Vandevere.
Winter Russet	Limber Twig	Baldwin	Ben Davis.			
Baldwin	Trader's Fancy	Traders Fancy	Early Harvest.			
Yellow Bellflower	Tompkins King	Winter Rambo	Wealthy.			
	R. I. Greening	Wealthy	Smokehouse.			
		Nansemond	Baldwin.			
			Roxburg Russet			
			Winter Winesap.			
			Yellow Bellflower.			
			Vandevere.			

Although no reports were received to indicate the apple districts of Taylor county, yet its location in the same general section with Preston and Barbour render it certain that the county possesses areas well suited to the production of this fruit. The report of the crop of 1898 also indicates the truth of the above conclusion as a reference to the map on page (96) clearly shows. The railroad facilities of the county are among the best in the State. With proper encouragement a remunerative fruit business should be possible in this locality.

TUCKER COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellars in fit condition for April market	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Pearmain	Ben Davis	Ben Davis	Rall's Genet	Winesap	Golden Russet	Lawver—Delaware Red Winter.
Rome Beauty	Rome Beauty	Rome Beauty	*Rome Beauty*	Nansemond	Gravenstein	Winesap.
Sweet Paradise	York Imperial	York Imperial	Ben Davis	Buckingham	Horse-Shoe Red	Romanite.
Fallawater	Vandevere	New Town Pippin.	Yellow Transparent	Early Harvest	Vandevere	Early Harvest.
York Imperial	Baldwin	Pearmain	York Imperial	Tompkins King.	Fallawater	Princess Royal—Russian.
Northern Spy	Wolf River	Golden Russet	Winesap	Baldwin	English Russet.	
Grimes Golden	Fallawater	Winesap	*Fallawater*		R. I. Greening.	
Rambo	Golden Russet	Winter Rambo	Oldenburg, Duchess of.			
Pound Royal	York Stripe	York Stripe	*New Town Pippin.*			
Dominie—Winter Rambo.	Cooper	Fallawater	*York Stripe.*			
Summer Rose	Tompkins King		*Golden Russet.*			
Bough, Sweet	Maiden Blush		Baldwin.			
Smokehouse	Pound Royal		Smokehouse.			
York Stripe			Maiden Blush.			
Moore's Extra			Vandevere.			
Yellow Bellflower.						

At present fruit growing forms little part of the general activity of the county. The fruit supply is not sufficient to meet the home demand. From the reports received, as well as from the elevation and character of the soil, the western, and particularly the northwestern, part of the county appears well suited to the industry. Reports of varieties grown also prove the locality suited to the production of the standard market and keeping sorts, as well as to a creditable list of dessert varieties. The fine fruit which has come under my observation in Barbour county leads me to believe that nature has done her part in Tucker county, particularly in that part indicated by the double cross-hatching on the map. As is the general verdict in all counties of the State, the hill orchards are most regular bearers, and the fruit is higher colored and better flavored, although that from the low-land orchards is frequently of larger size.

TYLER COUNTY.

TABLE FRUITS.	MARKET FRUTS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rambo	Rome Beauty	Ben Davis	*Ben Davis*	Rome Beauty	Red Astrachan	Rome Beauty.
Seek-no-Further	Ben Davis	Rome Beauty	*Rome Beauty*	Pumpkin Sweet.	Early Harvest	Rambo
Romanite	York Imperial	York Imperial	Romanite	Fallawater	R. I. Greening	Fallawater
Russet	Grimes Golden	Red Pearmain	Russet	Limber Twig	Grimes Golden	Peck's Pleasant.
Gilliflower	Baldwin	Romanite	Baldwin	Pound Royal	Roxbury Russet.	Pumpk weet.
Rome Beauty	Romanite	Winter Pippin	Pound Royal	Golden Sweet.		
Pound Royal	Russet	Russet	Early Harvest			
Early Harvest	Northern Spy	Baldwin	*Waldour*			
Pumpkin Sweet	Red Pearmain	Stark	Pumpkin Sweet			
Northern Spy	Waldour	Arkansas, Mam'h Black Twig.	Maiden Blush			
Golden Sweet	Pound Royal	Grindstone	*Rambo*			
Winesap	Roxbury Russet	Limber Twig	Fallawater			
Fallawater			*Golden Sweet*			
Smith's Cider			*Grimes Golden*			
Yellow Bellflower						
Grimes Golden						
R. I. Greening						

The areas in Tyler which are usually devoted to commercial apple culture seem to be that of the western portion of the county lying between Middle Island Creek and the Ohio river. The chief reason for the development of the industry in this section is the better facilities afforded for marketing the fruit. The orchards producing fruits of highest color and quality generally cap the hills. While the river valley plantations produce abundantly, the fruit is usually of the fall varieties, and intended for local use. The winter sorts grown on the high lands are, as a rule, better keepers and higher colored than the same varieties grown on the river bottom. The soil of the hill orchards is usually a sedentary clay loam, while that of the bottom is a river deposit composed of sand, gravel and other detretal matter. The apple thrives well on either soil, but climatic conditions are conducive to the highest perfection of the Rome Beauty, one of the favorite varieties, on the hill tops. While apple growing is a well established industry of the county, its possibilities are far from fully developed.

UPSHUR COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Northern Spy	Ben Davis	Ben Davis	Ben Davis	Bentley's Sweet.	Romanite.	
Maiden Blush	Rome Beauty	Rome Beauty	Rall's Genet	Northern Spy	Ben Davis.	
Fallawater	York Imperial	York Imperial	Bentley's Sweet	R. I. Greening	Early Harvest.	
Rambo	Rall's Genet	Romanite	Yellow Transparent.	Pearmain	Wine Apple.	
Winesap	Romanite	Rall's Genet	Grindstone		Yellow Transparent.	
Early Harvest	Limber Twig	Pearmain	Maryland		Strawberry.	
July Sweet	Roxbury Russet	Grindstone	Tompkins King		Limber Twig.	
Seek-no Further	Northern Spy	Limber Twig	Early Stripe		Grindstone.	
Waldour	Smokehouse	Maryland	York Imperial.			
Early Stripe	Waldour	Winesap	Red Astrachan.			
Red June	Bellflower		Early Harvest.			
York Imperial			Rome Beauty.			
Rome Beauty			Pewaukee.			
			Summer Pearm'n.			

Little attention has so far been given to commercial fruit production in this county. The little produced, however, is of good quality, and this in connection with the list of sorts enumerated as suited to the county should encourage those possessing soils of a loamy nature situated well up on the hillsides or hilltops to plant orchards to meet the increased local demand, which is certain to follow the development of the mineral resources of the county. The eastern half of the county is one vast coal field, and the increased population which will come with the development of the mines will make a market for a large quantity of fruit.

WAYNE COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rome Beauty	Rome Beauty	Ben Davis	*Pound Royal*	Rome Beauty	Pound Royal	Early Harvest.
Maiden Blush	Ben Davis	Rome Beauty	*Ben Davis*	Twenty Ounce	Early Harvest	Smith's Cider.
Pound Royal	York Imperial	Grindstone	*Rome Beauty*	August Tart	Ben Davis	Rambo.
Early Harvest	Maiden Blush	Romanite	Early Harvest	Wagener	Meadow Sweet	Ben Davis.
Golden Russet	Winesap	Blue Pearmain	Sweet Russet	Northern Spy	Maiden Blush	Rome Beauty.
Mann	Romanite	Meadow Sweet	Meadow Sweet	Early Harvest	Romanite	Western Beauty.
Rambo	Baldwin	Winesap	*Romanite*	Maiden Blush	Mann.	
Sweet Russet	English Rambo	Missouri Pippin	*Roxbury Russet*	Fallawater	Haas.	
Never Fail	Missouri Pippin	English Rambo	*Strawberry*	Moore's Extra	Winter Pippin.	
Smith's Cider	Smith's Cider	Never Fail	*Never Fail*	Winesap	Russet.	
Southern Queen	Early Harvest	Pound Royal	Red Astrachan	Ben Davis	Rome Beauty.	
Ben Davis	Pound Royal	Wolf River	Smith's Cider	York Imperial	Smith's Cider.	
Winesap	Crawford's Keeper	Red Jenneting	*Crawford's Keeper.*	Bellflower	Jumbo.	
Northern Spy	Grindstone	Virginia Beauty	*Fallawater*	Blue Pearmain	Crawford's K'p'r	
Virginia Greening	Pearmain	Limber Twig	Vandevere		Blue Pearmaine.	
Yellow Transparent.	Willow Twig	Milam	August Tart		Milam.	
Fallawater	Fallawater	Willow Twig	Black Detroit		Black Detroit.	
Vandevere	Western Beauty	Fallawater	Willow Twig		Justice King.	
Milam	Huff's Seedling		York Imperial.			
Black Detroit			Wealthy.			
Bough, Sweet			Justice King.			
Early Strawberry			Maiden Blush.			
York Imperial.						
Blue Pearmain.						

At present the county produces scarcely enough fruit for local consumption. The southern portion of the county contains considerable areas possessing soil conditions congenial to the apple, and a line of railroad bisects it from north to south. With such areas as are tributary to the railroad, together with lands near the Ohio river, which will later prove their fitness for apple culture, this county should not long report an inadequte supply for home consumption. The variety list proves that all the standard market sorts are grown, and the indications are that the lack is that of orchards rather than suitable areas or varieties.

WEBSTER COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from blight.	Varieties which suffer most from scab.
Rambo	Rome Beauty	Ben Davis	Rome Beauty		Grindstone	Wint'r Pearmain
Yellow Transparent.	Ben Davis	Rome Beauty	Ben Davis		Maiden Blush.	
Pearmain	York Imperial	Grindstone	Fallawater		Rambo.	
Golden Russet	Winesap	York Imperial	Rambo.			
Pound Royal	Gano	Spitzenburgh	Limber Twig.			
Early Harvest	Grindstone.	Limber Twig	Pearmain.			
Grimes Golden	Fallawater	Winesap.	Early Harvest			
Rome Beauty	Pippin	Hubbardston	Cranberry Pippin.			
Smith's Cider		Jonathan.	Tompkins King.			
Bellflower		Smith's Cider	Pennock.			
Maiden Blush		Big Hill	Bellflower.			
Northern Spy		Buckingham	Big Hill.			
Pennock			Winesap.			
Milam.						
Haas.						
Fallawater.						
Winesap.						

The map seems to indicate that Webster county has two sharply defined areas suited to the production of apples. Reports confirm the verdict of the surface for the northern half of the county, while reports from Pocahontas lead to the conclusions indicated by the red lines in the southern part of the county. Since the territory is an almost continuous coal field good local markets are certain to come with the removal of the coal. Persons owning land near mining towns should prepare themselves to meet this demand.

WETZEL COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pits or cellars in fit condition for April market	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Rambo	Rome Beauty	Ben Davis	Early Harvest	Rome Beauty	Fallawater	Golden Russet.
Northern Spy	Ben Davis	Rome Beauty	Bough Sweet	Golden Russet	Ben Davis	Rome Beauty.
Early Harvest	Baldwin	Romanite	Rambo	Yellow Bellflow'r	Northern Spy	Yellow Bellflow'r
Pound Royal	Russet	Grindstone	Winesap	R.I. Greening	Baldwin	R. I. Greening.
Yellow Bellflower.	Grimes Golden	Russet	Golden Russet	Early Harvest	winter Winesap.	Limber Twig.
Fallawater	Golden Russet	Golden Russet	Baldwin	Pound Royal	Russet	Maiden Blush.
Bough, Sweet	Fallawater	Fallawater	Red Astrachan	Russet	Rome Beauty	Rambo.
Fall Winesap	Northern Spy	Baldwin.	Smith's Cider.		Smith's Cider	Ben Davis.
Early Strawberry	Waldour	Northern Spy	Seek-no-Further		Orange	Red Astrachan.
Baldwin	Willow Twig	Willow Twig	Bethlehemite		Romanite	Romanite.
Smith's Cider	Bethlehemite	Bethlehemite	Russet		Yellow Bellflow'r	Red Romanite.
Orange	Alexander	Alexander	Alexander		Maiden Blush	Roxbury Russet.
Bethlehemite	Maiden Blush	Maiden Blush	Ben Davis		Golden Sweet.	
Seek-no-Further	Red Astrachan	Black Jersey	Golden Sweet.		Red Astrachan.	
Tompkins King	Yellow Transparent.	Sheep Nose	Spitzenburgh		Transcendent.	
Winesap	Early Harvest	Vandevere	Grimes Golden		Transparent.	
Golden Sweet.	Yellow Bellflower.	Stark	Maiden Blush			
Grimes Golden	Romanite	Lawver—Delaware Red Winter.	Tompkins King.			
Maiden Blush	Smith's Cider.		Rome Beauty			
Black Jersey	Bough Sweet		Summer Rose.			
Rome Beauty	R. I. Greening		Yellow Transparent.			
Ben Davis	Buncome, Red Winter Pearmain.		Transcendent.			
Roxbury Russett	Pound Royal.					
Grindstone.						
Pearmain.						
Red Russet.						
Waldour.						

WETZEL COUNTY—Continued.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Penaukee.....						
R. I. Greening... ..						

From all counties of the State fronting the Ohio river we get the same emphatic expression, that the hill lands produce orchards, which bear more regularly than the bottom lands, of fruits of higher color and better texture and keeping qualities. One reason for this may, however, be found in the fact that the Rome Beauty is a general favorite among growers in these localities, and that it is pre-eminently an upland variety. We are not, therefore, justified in a general condemnation of the valley land, for varietal differences are very marked, and are sufficient to account for much of the difference reported in favor of the hill land. Ordinarily it is best to follow the general experience of the locality, and for any who contemplate extensive plantations, I would say plant only well tested varieties on such land as has proven congenial to them both as regards elevation and exposure. As is indicated by the fruit list, the Rome Beauty is the general favorite as a market variety. Large areas are by soil and elevation suited for orchard purposes. This together with river frontage and its two railroads should foster the development of the apple industry in this county.

WIRT COUNTY.

TABLE FRUITS.	MARKET FRUITS,	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	CAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Fallawater	Rome Beauty	Ben Davis	Wagener	Rome Beauty	Ben Davis.	
Early Harvest	Ben Davis	Rome Beauty	Rall's Genet	Wealthy	Bailey's Sweet.	
Grimes Golden	York Imperial	York Imperial	Wolf River	Fallawater	Lawver.	
Bough, Sweet	Grimes Golden	Grindstone	*Ben Davis*	Pound Royal.		
Rambo	Stark	Romanite	*Vandevere.*			
Yellow Transparent.	Winesap	Grimes Golden	Yellow Bellflower.			
R. I. Greening	Missouri Pippin	Winesap	Benoni.			
Early Strawberry	Willow Twig	Winter Vandevere	Rome Beauty.			
Ben Davis	Grindstone	Stark	Smith's Cider.			
Astrachan	Vandevere	Pennock	Bailey's Sweet.			
Hyslop	Golden Russet	Rambo	Maiden Blush.			
Smith's Cider	Baldwin	Nickajack	Willow Twig.			
Lawver, Delaware Red Winter.	Russet	Rall's Genet	Romanite.			
Vandevere	Lawver.					
June Sweet	Black Bellflower.					
Maiden Blush	Roxbury Russet.					
	Smith's Cider.					
	Yellow Bellflower.					

Wirt county, although handicapped by lack of transportation facilities, nevertheless possesses a large area which seems to be well fitted for the production of fruit This conclusion, while confirmed by both the map and the list of sorts, is also confirmed by the experience of growers in Wood county, where some of the finest Rome Beauties grown in the State are produced, on the white clay lands which are scattered through the county. With the extension of railroads up the Little Kanawha river, and the improvement of the river itself, large areas in the western part of the county will undoubtedly be developed for orchard purposes. Reports indicate a preference for hillsides with an eastern outlook or hill tops as sites for orchard purposes.

WOOD COUNTY.

TABLE FRUITS.	MARKET FRUITS.	LONG KEEPERS.	BEARING.	BLIGHT.	BLIGHT RESISTING.	SCAB.
Varieties held in highest esteem for eating out-of-hand.	Sorts having best form, color, and keeping qualities.	Varieties which keep in pit or cellar in fit condition for April market.	Varieties which bear most regularly—underscored bear annually.	Sorts which suffer most from blight.	Varieties most exempt from scab.	Varieties which suffer most from scab.
Red Astrachan.....	Rome Beauty.....	Ben Davis.....	Ben Davis	Rome Beauty....	Ben Davis	Rome Beauty.
Grimes Golden.....	Ben Davis	Rome Beauty.....	Rome Beauty... ..	Roxbury Russet.	Rome Beauty.	
Early Harvest.....	Grimes Golden....	Romanite	Red Astrachan....	.....	Romanite.	
Early Stripe.....	Stark	Winter Pearmain.	Pound Royal.....	.....	Smith's Cider.	
Chandler.....	Winter Pearmain.	Grindstone.....	Smokehouse	.....	Rambo.	
Rambo.....	Baldwin	Grimes Golden....	Raule's Genet.			
Smith's Cider.....	Yellow Bellflower..	Baldwin.....	Grimes Golden.			
Yellow Transparent.	Golden Gate.....	.....	Early Harvest.			
Roxbury Russet....	Winesap					
Early Strawberry..	Twenty Ounce.					
Fall Pippin.						
Pound Royal.						
Rome Beauty.						
Winter Pearmain.						
Vandevere.						
Pearmaine.						
Winesap.						
Yellow Bellflower.						

Certain sections of this county possess a soil and climante which enable it to produce the Rome Beauty in a state of high perfection, and, as might be expected, this is one of the most popular and best paying market sorts for the section. As indicated by the map, the southwestern part of the county seems particularly suited to orcharding, yet the small areas outlined in other parts of the county signify their special excellence rather than the unfitness of other sections. The commercial apple development already existing speaks more emphatically of the capabilities of the county in this respect than anything that could be expressed in this bulletin. To any one contemplating planting a commercial orchard in this county I say, visit successful growers possessing soil and climatic conditions like your own, learn of them the secrets of good tillage, spraying, harvesting and marketing, then, if possible, improve upon these practices.

NOTICE.

Application for bulletins of this Station should be addressed to the Director of the West Virginia Agricultural Experiment Station, Morgantown, W. Va.

(The bulletins named below are available for distribution.)

No. 4. The Creamery Industry; Its Adaptability to West Virginia.

No. 5. The Selection of Milch Cows.

No. 14. Farm and Garden Insects and Experiments with Remedies; Notes of the Season.

No. 15. Raspberry Gouty-Gall Beetle.

No. 16. Yellow Locust, Insect Ravages upon.

No. 17. Black Spruce, Insect Ravages.

No. 19. Your Weeds and Your Neighbor's, Part 1. Weeds as Fertilizers.

No. 25. Plat Experiments with Commercial Fertilizers on Wheat.

No. 27. Notes on Pruning.

No. 28. Plat Experiments with Commercial Fertilizers on Corn.

No. 29. Experiments with Potatoes at the Station. Experiments on Corn at the Out Stations.

No. 30. Address and Notes on Sheep.

No. 33. Sub-Irrigation in the Green House.

No. 38. Potato Blight, Potato Scab.

No. 42. Vegetables.

No. 43. When, Why, What and How to Spray.

No. 44. Practical Entomology.

Special Bulletin No. 2. Proceedings connected with the celebration upon the completion of the Station Building and the organization of the Sheep Breeders and Wool Growers' Association and the State Horticultural Society.

Third Annual Report, 1890.

No. 54. Nursery Hints.

No. 55. Sugar Beets.

No. 58. The Effect of Pressure in the Preservation of Milk.

No. 59. Whole Corn Compared with Corn Meal for Fattening Hogs.

No. 60. Poultry Experiments.

No. 61. Sheep Feeding Experiments.

No. 62. A Study of the Effects of Incandescent Gas-light on Plant Growth.

No. 64. Sugar Beet Investigation in 1899.

No. 66. Fruit Diseases and How to Treat Them.

No. 67. The Hessian Fly in West Virginia.

No. 68. Periodical Cicada or Seventeen-year Locust in West Virginia.

No. 69. Report on Examination of Wheat Stubble from Different Sections of the State, and on the Joint Worm in Wheat.

No. 70. Spraying.

No. 71. Poultry Experiments.

No. 72. Commercial Fertilizers.

No. 73. Poultry Experiments. Loss of Weight in Eggs During Incubation.

No. 74. Cold Storage.

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